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I. DINKA VILLAGE. p. 159.

THE

HEART OF AFRICA.

THREE YEARS' TRAVELS AND ADVENTURES

IN THE UNEXPLORED REGIONS OF CENTRAL AFRICA.

FROM 1868 TO 1871.

BY

DR. GEORG SCHWEINFURTH.

TRANSLATED BY ELLEN E. FREWER.

WITH AN INTRODUCTION BY WINWOOD READE.

IN TWO VOLUMES.

VOL. I.

WITH MAPS AND WOODCUT ILLUSTRATIONS.

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INTRODUCTION.

ABOVE Assouan, the terminus of tourists is the Nubian Desert, a yellow arm of the Sahara, thrust between Central Africa and Egypt. When this desert is crossed, you come to the ancient Ethiopia, which consists of lowlands watered by the Nile, while a little to the left is Abyssinia, the Switzerland of Africa. The White Nile, which comes from the Equator, is hereabouts joined by the Blue Nile, or Black Nile, from the Abyssinian Wells; and near their confluence is the town, Khartoom. In the glorious days of the Pharaohs Ethiopia was colonised by Egypt, and there was a famous city, Meroe by name, possessing pyramids and temples. In the days of Egyptian decline Ethiopia became independent, conquered the mother country for a time, and was never entered by the armies of the Persians. The Ptolemies who afterwards reigned at Alexandria did conquer Ethiopia, even to its Highlands, carrying their arms, as they boasted, where the Pharaohs themselves had never been; but the Romans did not occupy the country; they followed the advice of Augustus,* and the Nubian Desert was made their frontier.

In the same manner the Arabs under the caliphs did not attempt the conquest of Ethiopia, and it was perhaps owing to Buonaparte that Turkish Egypt advanced so far to the south.

* Gibbon, Vol. I. c. i.

The French expedition has always been stigmatised as a fruitless crime. But by the French the power of the Mamelukes was broken; by the French was displayed on Egyptian soil the superior genius of Europe, and thence may be derived a movement similar to that which in the days of the Pharaohs was produced by the Phil-Hellenes, or kings who were "lovers of the Greeks." Mehemet Ali organised an army in the European manner, and crossing the Nubian Desert, conquered the lowlands of Ethiopia or Soudan. At the same time he commenced the civilisation of Cairo. These two great projects, culture in the capital, and conquest in Soudan, have been carried out of late years with marvellous intelligence and energy by the reigning Khedive. To understand what has been accomplished, let us compare the Egypt and Ethiopia of the present with the past.

In the past, a European traveller who visited Egypt incurred contumely and considerable risk. He was not allowed to ride on a horse; he was called "dog" by the pious who passed him in the streets, and pelted by the playful gamin; the dogs barked at him; the women turned their eyes away as if they had seen an unclean thing. But now Cairo, like Rome and Florence, lives upon tourists, who, if they are not beloved, are welcome; the city is lighted by gas: it has public gardens in which a native military band performs every afternoon; an excellent theatre, for which Verdi composed Aïda; new houses in the Parisian style are springing up by streets, and are let out at high rents as soon as they are finished. No gentleman wears a turban; and few any longer affect to despise the blessings of a good education.

Let us now pass on to the south. In the olden time the Nubian Desert was infested by roving bandit tribes. Since the days of Mehemet Ali they have earned an honest

livelihood by letting out their camels: and soon they will become navvies, railway porters, &c. Already there is telegraphic communication between Cairo and Khartoom, and a railway is about to be commenced. As for the Soudan, it was formerly divided among a number of barbarous chiefs almost incessantly at war. It is now conquered and at peace, and trade is seldom disturbed. Civilised opinion, all-powerful at Cairo, penetrates into the remotest recesses of this new African empire; the traffic in slaves is abolished, and those who perpetrated their crimes in the dark depths of the continent have lately been reached by the arm of the law.

It is my purpose in making these remarks to show what facilities for geographical research are afforded by the power and good will of Egypt. In former times the explorer began at the Nubian Desert or the Red Sea; he might be plundered of all that he possessed before he entered negro Africa at all. Supposing he arrived safely in Sennaar, he was at once exposed to those vexatious extortions and delays which so frequently robbed him of his money and his health before he had opened new ground. As it is, a firmam from the Viceroy obtains him men and boats from the governor of Khartoom, and therefore his point of departure is shifted many degrees to the south. He is now able to penetrate into the heart of Africa before he encounters an independent chief. The area of the firmam is immense, but beyond that area the dangers and difficulties of travel are perhaps increased by the aggressive policy of Egypt. The princes of Darfoor and Waday have a constant dread of annexation, and a European traveller, if he entered those countries, would find it difficult to obtain his congé. The west forest region which lies south of Darfoor and

Waday, and also along the main stream of the Nile, has always been a slave-hunting ground; annual raids are made from Darfoor and Waday, the hunters taking out licences from their kings,* and the Egyptian company of bandits, whom Sir Samuel Baker recently dispersed, hunted the land south of Gondokoro. These wars unsettled the country and rendered it difficult for travel. The slave-hunters intrigued against the European, fearing that he would expose them to the government at Cairo; and the slave-hunted had learnt to regard all white men as their foes and oppressors. Thus it has happened that out of a host of men who have attempted to penetrate Africa from north to south only two have achieved success. The first and foremost of these is Sir Samuel Baker; the second is Dr. G. A. Schweinfurth, the author of this work.

He was born at Riga in December 1836, and was the son of a merchant. He studied at Heidelberg and Berlin, where he took his degree as Doctor of Philosophy, and devoted himself from his boyhood to the science of botany. At his first school one of the masters was a son of a missionary in South Africa; he used often to describe the wonders of that country, and perhaps it was in this manner that his mind was turned towards that country which afterwards created his career. But the proximate cause was a collection of plants placed in his hands to arrange and describe. In 1860, the young Freiherr von Barnim, accompanied by Dr. Hartmann, had made a journey in the region of the Nile, where he had fallen a victim to the climate. His collections were brought home, and as Schweinfurth day after day studied these dry corpses, a yearning came upon him to go to

* Mohammed el Tounsy, Wadai.

the land where he might behold them in all their bloom and their beauty, and where he might discover new species—those *golden joys* for the explorer. In 1863, he left Berlin for Egypt, and having botanised in the Delta of the Nile, travelled along the shores of the Red Sea, skirted the Highlands of Abyssinia, passed on to Khartoom, and finally, his purse being empty, returned to Europe, after an absence of two years and a half, with a splendid collection of plants. But soon he languished for Africa again, and submitted to the Royal Academy of Science a plan for the botanical exploration of the equatorial districts lying west of the Nile. His proposals were at once accepted; he received a grant of money from the Humboldt Institution, and, in 1868, he landed in Egypt. During three years he was absent in the *heart of Africa*, and, even before he had returned, his name had already become famous in Europe and America. Travelling, not in the footsteps of Baker, but in a westerly direction, he reached the neighbourhood of Baker's lake, passing through the country of the Niam-Niam, and visiting the unknown kingdom of Monbuttoo. As an explorer, he stands in the highest rank, and merits to be classed with Mungo Park, Denham and Clapperton, Livingstone, Burton, Speke and Grant, Barth and Rohlfs. He can also claim two qualifications which no African traveller has hitherto possessed. He is a scientific botanist, and also an accomplished draughtsman. Park had some knowledge of botany, and Grant made an excellent collection, but both must be regarded as merely amateurs. In other works of African travel the explorer has given rude sketches to some professional artist, and thus the picture has been made; but Schweinfurth's sketches were finished works of art. In a geographical sense, this work is of importance as a contribution to the problem

of the Nile; and ethnologically it sets at rest a point which has long been under dispute, viz., the existence of a dwarf race in Central Africa. These Pygmies are mentioned by the classical writers; much has been said about them by modern travellers on the Nile; Krapf saw one on the Eastern Coast; the old voyagers allude to their existence in the kingdom of the Congo," and Du Chaillu met them in Ashango Land. Yet still much mystery remained which, thanks to Schweinfurth, is now at an end. That such a race exists is now placed beyond a doubt; and it is probable that these dwarfs are no other than the Bushmen of South Africa, who are not confined, as was formerly supposed, to that corner of the continent, but also inhabit various remote recesses of Africa, and were probably the original natives of the country.

WINWOOD READE.

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ERRATA.

Vol. I., page 32, line 10 from bottom, *for* "prevaence," *read* "prevalence."
„ „ 50, line 16 from top, *for* "pew," *read* "pen."
„ „ 140, line 6 from bottom, *for* "Kigelia," *read* "Kigeliæ."
„ „ 419, line 6 from bottom, *for* "Shaba," *read* "Sheyba."

DAR FOOR
BALLANA-EL-HOMR
TUTY
KREBY TRIBES
BELLONIA
MONBUTTOO
MAP
OF
DR. SCHWEINFURTH'S DISCOVERIES
IN
CENTRAL AFRICA

THE HEART OF AFRICA.

CHAPTER I.

My former journey. Inducements to a second. Plan and object. Custom-house difficulties at Suez. Scenes in the Governor's divan. Environs of Suez. Sulphur mine of Gimsah. Recluse life of the officials. An unenticing coast. The roadstead of Djidda. The bride of the fish. Voyage across the Red Sea. Salt works of Roway. Appearance of the shore. Charm of the moonlight nights. Importance of Suakin. First night-camp in the mountains. New species of Dracæna. Numerous succulents among the flora. The valley of Singat. Idyllic abode of the Governor. Mountains of Erkoweet. The olive-tree wild. Gardens of the desert. Characteristics of the town Bedouins. Equipment for the desert. Old fanatic from Kano. Injury and oppression. The Bedouin camp O-Mareg. Brown coating of the rocks. Goats and sheep of the Bedouins. Plant with my own name. Contest with the camel-drivers. Ugliness of the women. A monument of nature. Arrival at the Nile. Tent in peril. A wedding. The ninety-nine islands and the Sabdook-straits. Pitiable condition of the country. Arrival at Khartoom.

WHEN, in the summer of 1868, I prepared for the great journey, of which the following pages contain the description, I was already no novice on African soil. In 1863 I had served an apprenticeship in the art of travelling in the sunny fields of Egypt and Nubia. For months together, in my own boat, I had navigated the Red Sea; and it was while I was exploring the untraversed mountains by its coasts that I seriously conceived my larger project. My curiosity was particularly attracted towards the district of the independent Bishareen. I had then repeatedly crossed the country between the Nile and the sea, and while sojourning on the lower

terraces of the Abyssinian highlands, I had learnt to appreciate the full enchantment of the wonders of nature in Africa.

In 1866, passing through Khartoom and Berber, I found my way back again to Egypt.

Once entertained, the project of the botanical investigation of these lands resolved itself more and more into the problem of my life. The splendid herbarium, too, which I had carried home as the reward of my labours, obtained though it was at the cost of repeated attacks of fever, contributed to intensify my desire. Altogether the result of my first attempt was an encouragement and happy omen for my success in a second. My experience hitherto was likewise advantageous to me so far as this,—it had afforded opportunity of cultivating the faculty so necessary to every explorer of unknown districts, of correctly generalising from details. Observations and impressions require to be surveyed from a comprehensive point of view, in order that the characteristic features of a country may be represented in their true proportions.

Besides this general information which I had practically gained and which I could no more have learnt from books than I could have learnt the foreign habits and modes of thought, I had also acquired that fluency in the Arab vernacular which is indispensable to every traveller, and which, moreover, appears to suffice for the whole of the immense district which is commanded by the Nile and its host of tributaries.

Herbarium, topography, and language all seemed to favour me; the chief drawback was the state of my health. I suffered from a disorganised condition of the spleen, which gave me some uneasiness and misgiving; yet, after all, it appeared to be just the key that had unlocked the secret of the unexampled good fortune of my journey. The numerous attacks of fever had probably reduced it to such a state of inactivity, that it ceased to be affected by any miasma; or

perhaps it had assumed the function of a condensator, so as to render the miasma innocuous. Anyhow, it seemed to perform services which I could not do otherwise than gratefully accept as a timely gift of Providence. As a farewell on my landing in Alexandria, I experienced one slight twinge from my malady, and then it was quiet; it did not again re-appear even in the noxious swamps of the Upper Nile, which had been disastrous to so many of my predecessors. No recurrence of my disorder interrupted my activity or clouded my enjoyment, but fever-free I remained, an exception among a hundred travellers.

The time which elapsed between the completion of my first, and the commencement of my second journey, was occupied in studies which were directed to the scientific classification and analysis of what had been so abundantly secured.

Whoever knows the blameless avarice of a plant-hunter will understand how these studies could only arouse in me a craving after fresh booty. I could not forget that the greater part of the Nile territory, with the mysterious flora of its most southern affluents, still remained a fresh field for botanical investigations; and no wonder that it presented itself as an object irresistibly attractive to my desires. But one who has himself, on the virgin soil of knowledge in unopened lands, been captivated by the charm of gathering fresh varieties, and has surrendered himself to the unreserved enjoyment of Nature's freedom, will be prompted to yet keener eagerness; such an one cannot be daunted by any privation he has undergone, nor deterred by any alarm for his health: he recalls as a vision of Paradise the land he has learnt to love; he exaggerates the insalubrity of a northern climate; he bewails the wretched formality of our civilised life, and so, back to the distant solitudes flies his recollection, like a dove to the wilderness.

Of this kind were my impressions as these two years passed

away. I was prohibited from any immediate prosecution of my hope by the inadequacy of my pecuniary means. A welcome opportunity, however, soon presented itself, and enabled me to resume my investigation of the district of the Nile.

After the death of Alexander von Humboldt, there had been founded in Berlin, as a monument of gratitude and recognition of his services, the "Humboldt Institution of Natural Philosophy and Travels." The object of this was, without regard to nationality or creed, to assist talent in every direction in which Humboldt had displayed his scientific energies; and it was especially directed that the funds should be applied to promote travels in the most remote districts. The Institute contemplated a supply of means for the prosecution of those philosophical studies to which Humboldt dedicated himself with such unceasing ardour. The Royal Academy of Science of Berlin was vested alike with the power of deciding on the undertakings and of selecting suitable agents to carry out their designs.

To that eminent scientific corporation I ventured to submit a scheme for the botanical investigation of those equatorial districts which are traversed by the western affluents of the Upper Nile. My proposal met with a ready sanction, and I was rejoiced to receive a grant of the disposable funds of the Institution, which had been accumulating for the space of five years.

Thus it happened, that in July 1868 I was once more upon the soil of Africa.

During my first stay at Khartoom, which is the centre of government of the Egyptian Soudan, I had collected a variety of information about the ivory expeditions undertaken by the merchants of the place to the country about the sources of the Nile; I had likewise made certain alliances with the natives, and by these means I hoped to project a plan for a scientific progress over the district on a firm basis. There was no doubt that in the heathen negro districts of

the Upper Nile, the Egyptian Government exercised little influence and no authority. Under its direction, the Khartoom merchants had indeed done something—for sixteen years they had traversed the land in well-nigh every direction, and they had established stations for themselves in th negro borders; but they had not made good any hold upon the territory in general. Nevertheless, I had no alternative than to conclude that without the countenance of the Government, and without the co-operation and support of the merchants, there was no reasonable expectation that the objects of a scientific traveller could be forwarded.

I was quite aware that various travellers had already attempted, at a large sacrifice of money, to arrange independent expeditions, and to engage an adequate number of armed men on their own responsibility; but no sooner had they reached the more remote regions, where the few channels of the river were all in the hands of the merchants, than they necessarily became dependent on the merchants for their supplies. There was, besides, no other quarter on which to rely for obtaining porters, who are indispensable in a country where all known beasts of burden are accustomed in a short time to succumb to the climate.

Upon the whole, therefore, I soon came to the determination of being taken in the train of the merchants of Khartoom, trusting that the countries opened by them would offer sufficient scope for all my energies. It was probable that the ivory traders would never, of their own accord, want to thwart me; yet I would not rely entirely on this, as I knew that they were themselves subjects of the Viceroy. As matter of fact, probably, they were entire masters of the situation in the negro countries, and really irresponsible; but still their interests made them apparently subservient to an absolute government, and this was the handle that I desired to use accordingly. By diplomatic interest, I had secured the ostensible recognition of the Viceregal Govern-

ment, but from my own experience, I was fully convinced that mere letters of recommendation to the local authorities, as long as their contents are limited to ordinary formal phrases, are of very questionable advantage. I might refer particularly to Sir Samuel Baker's misadventure as affording an illustration of the insufficiency of such credentials. I considered myself fortunate, therefore, in obtaining from the Prime Minister of the Viceroy (although he was himself not in residence) special orders, which I knew were indispensable, to the Governor-General of Khartoom. The Governor-General was to superintend any contract which I might make with the merchants to secure that my journey through the district of the Gazelle River should be unhindered, and to ensure the due fulfilment of whatever obligations might be undertaken.

Thus the course appeared to be smooth, by which I might hope to reach the centre of the mysterious continent; but I was still far from my object, still far from the point which I could consider as the true starting-point of my real journey. Between Alexandria and Khartoom was a route familiar enough, but even Khartoom could hardly be deemed the beginning. In order to reach the cannibal and the pigmy there faced me, as perchance there does the reader, many a trial of patience. What I did in Alexandria and Cairo can afford little or no interest; I was there fully occupied in preparations and purchases for my equipment, at times feeling much depressed. Before me lay the uncertain future, and the perils, which I could not conceal from myself, of this inhospitable region; and behind me was Europe, in which to dwell was insupportable, without seeing my cherished designs accomplished.

In Suez the dejection of despondency yielded to feelings of a more lively nature, partly from vexation, partly from amusement. The custom-house afforded me vexation, whilst the Governor's divan was an unfailing source of amusement.

I arrived in Suez on the 16th of August, proposing to continue my journey to Djidda by the next steamer. Much gratified by the intelligence that a steamer belonging to the Sulphur Company would start in four days, I was proceeding to embark at once, when I was stopped by the custom-house authorities, who desired a strict investigation of the luggage, and insisted upon payment of the tariff duties for every article of my huge accumulation of baggage. Perhaps everything might have been arranged, but when my additional waggon appeared, although I explained that it had been furnished me by the Government, and notwithstanding that I was the bearer of letters directed to the Egyptian revenue officers, the director required an extra special order, and referred me to the Governor, who telegraphed back to Alexandria. In the meantime, for the next two days, I was compelled to take turns with my factotum, the Nubian servant, to sit in the sun on my baggage in order to protect my boxes which contained my money bags full of Maria Theresa dollars. As a refuge for the night I betook myself to a hotel, not much larger than a hut, in which I had already some years previously found the accommodation just suited to give me a foretaste of the privations of the desert.

My consternation may be imagined, when at last there arrived from the capital an order that I must pay precisely as any ordinary traveller. Hardly had I recovered my first surprise, when accidentally one of the Governor's clerks called attention to some contradictions in the despatch. Further inquiries were instituted, and the discovery was made that an important word had been overlooked, and that the tenor of the message was that I was "*not*" to pay.

Whilst this was going on, and I was kept in my suspense, I stayed chiefly in the Governor's divan. This officer, untroubled at the revolutions which were taking place around him, untouched by any development of the spirit of the age so perceptible here, where three-quarters of the world join

hands, ruled his people in simplicity and in the fear of the Lord. During the time which I passed sitting in his divan awaiting the issue of events, I was a witness of several incidents exhibiting this simplicity, and which struck me as being somewhat ludicrous. First stepped in a swarthy-looking fellow, with a knavish countenance, such as one meets but seldom even in the streets of Alexandria. He wanted to legitimatise himself in his character of a British subject, or "*protégé*," as he styled himself. To the Governor's inquiry where he came from, he said from Tarablus. "Tarablus! then how can you be English?" said the Governor. "Why, surely, because Tarablus is in the west," replied the rogue. It was objected that he was forging a lie, and that Tarablus was not in the west, and thence there ensued a tedious geographical discussion about Eastern and Western Tripoli. The rascal went on to assert that his father was a native of Malta, that after his death he had married, settled in Tripoli, and had become a Mohammedan; and then he cunningly added, "Allah be with you, and give you grace! I should hope I could be an Englishman and yet be a good Mussulman." Quite satisfied, the Governor gave a contented look, and let him pass. The order was given for the next applicant to be heard. With hesitating steps there now approached a little man, black and repulsive, bringing with him a veiled girl to the front. It was a scene which suggested the thought that he must be a slave-dealer, and it reminded me of one of Horace Vernet's famous pictures; but the circumstances were different. He proceeded to unroll mysteriously and display a splendid caftan of yellow silk. He was, it seemed, a tailor of the suburbs, and the veiled beauty was a slave-girl from Enarea, who had formerly been sold for filthy lucre, and was now bartering her honesty under the same inducement. The caftan was a gorgeous vestment lined with imitation ermine, and not unlike the night-dress of Ivan the Terrible, which is preserved in the Troitsky con-

vent near Moscow. The girl had ordered the dress, and now would not pay for it, and accordingly the tailor had brought her with him to the Governor, and so enforced his demand.

The next scene had a wonderful climax. It might almost remind one of the tedious campaign ending with the sudden collapse of Magdala. What the beginning of the contention was, I cannot tell. The Governor had apparently been trying to mediate between two Arnauts; but as the prolonged discourse was carried on in Turkish, I did not understand it. A quantity of apples were produced, and some of them laid for an evidently conciliatory purpose beside the Governor. All at once, however, some misunderstanding occurred, and there arose a furious storm of apples: they were hurled in every direction, the Bey himself being the originator of the bombardment; and the scene closed as effectively as though there had been a display of fireworks. For myself, I was happily protected by my situation; but I could see all, and am ready, if need be, to vouch for my representation in the presence of the great Sultan himself. If any one is inclined to suspect that such a sight is incompatible with the dignity or indolence of Turks, I can only remind him that their enlarged intercourse with temperaments less sluggish than their own has broken down much of their composure; and that now just as little patience can be expected from an African Bey when he is irritated, as from an excited Bavarian corporal. Although these details may appear to have no direct connection with what concerns Central Africa, yet they are significant as exhibiting how completely, for all purposes of administration, every institution which is Turkish or Mohammedan remains fixed on its ancient basis. Though Suez were to become a second San Francisco, or however much it might concentrate upon itself the traffic of the world, scenes of judicial practice such as these would be sure to recur until the last Pasha or Bey had taken farewell of this mortal state.

Since my first visit five years ago, in January 1864, the population of Suez had increased threefold. The Abyssinian campaign alone had been the means of almost doubling the number of its inhabitants. A portion of the camp formed for the marching troops, and an immense dep ôt for trusses of hay, seeming well nigh like a large village in itself, were now the sole relics of that successful enterprise.

The fresh-water canal, which had now been completed for five years, had not effected any marked improvement upon the melancholy environs of the town, where desolation still reigned as ever; no gardens, no plantations, no verdure relieved the eye, which sought its refreshment from the blue sky and the azure sea. The hopeful expectations which were entertained from that canal seem by no means to have been realised. The deposit of any fertilising soil proceeded very slowly, and hitherto had made no change in the condition of vegetation at Suez, except just at the foot of the Mokkatan mountains, where the boulder flats, unimpregnated with salt, are traversed by a separate side branch of the main canal. Large fields of vegetables are cultivated here, and, without the aid of man, many varieties of desert plants contribute to the verdure. The tourist who loves to inscribe fresh acquisitions in his diary, may here without trouble find the far-famed "rose of Jericho," which he would seek in vain around the suburbs of Cairo.

In order to reach Khartoom, I had chosen the sea-route by Suakin, so as to avoid the heat and fatigue of a journey through the great Nubian desert. This sea-route, by Suakin and Berber, is quicker and altogether less expensive than that by Assouan and Korosko; but it is not advisable for merchants who are travelling with any quantity of goods, on account of the heavy duties which are levied both at starting from Suez and at landing at Suakin.

To save trouble and time I thought it would be best to proceed to Djidda, and there hire a sailing vessel to convey

our party across to Suakin. To reach Djidda, I made choice of a little French packet which was going thither in preference to one of the Egyptian Azizieh steamers which ply between Suez and Massowa. These larger vessels do indeed touch both at Djidda and Suakin, but they are not suited for general travellers. The name of our little steamer was 'Prince Mohammed Tawfik,' (the heir-apparent to the throne of Egypt): it belonged to the "Compagnie Soufrière," and was commissioned to supply the sulphur mines of Gimsah on the Egyptian coast with fresh water every fourteen days. Although it was in no way adapted for the conveyance of passengers, I was nevertheless quite comfortable on board. It was a vessel of only 300 tons burden, but by dividing the receptacle for conveying the Nile water into seven separate compartments, a great economy of space was effected, and a good hold reserved. The fact of the captain being a Dane, was a still farther recommendation.

It was a memorable morning, that 18th of August, on which the sailing vessel was prepared to leave the roadstead. Many a curious eye, in those early hours, was strained to witness the sun, as its disk rose darkened by the shadow of an eclipse. Above the flood of the Erythræan Sea appeared a golden sickle, its crescent light bearing resemblance to the moon. We were detained for yet two days in the roadstead; but at last we weighed anchor, and the little craft soon vanished from the midst of its more imposing neighbours, the great mail ships and men-of-war, which gave such a bright animation to the anchorage. A refreshing breeze from the north-east carried us across the gulf. Ever deepening violet shadows covered the shore, until the obscurity of night had completely hidden Mount St. Catherine and the Mount of Moses from our gaze. At dawn we were facing the grim shore of the sulphur mountain. Here we were greeted by the waving of the French tricolour, which, in the

monotonous grey that mantled the whole land, afforded a bright resting-place for the weary eye.

According to a treaty made with the Egyptian Government, the Company are enabled to carry on their operations over 160 miles of coast, south from Cape Seit, where the Egyptian territory forms a promontory opposite the peninsula of Sinai. The coast line is similar in outline to the adjacent Gimsah, whilst, with the group of islands which lie off it, it forms the entrance of the Gulf of Suez. We now passed down the narrow channel which divides the group of islands from the mainland, and there lay before us the bluff of Gimsah, a steep mass of pure gypsum, white as chalk. This peak is about 200 feet above the level of the sea: it faces nearly south, its aspect is bare, and like all the mountains contiguous to the sea on these dreary and uninhabited coasts, it presents hardly the faintest trace of vegetation. Since July, 1867, the mines have been worked by a gang of labourers, of which twenty-six were Europeans and 300 were brought from Upper Egypt. For a time they were yielding a rich produce, which afforded the best hopes for the future; but now, like so much else in the country, have fallen into decay. The mutual intrigues and corruption of the contractors have yielded a fresh testimony on the one hand, to the continual ill-luck of the Government, which seems fated never to be able to improve the bounty of its natural resources; and on the other, to the ruthless avarice of foreigners, which is ever stopping the progress of the country. A tedious lawsuit has laid bare a whole series of scandals, discreditable alike to the directors and to the administrators of the Viceregal Government. The state of affairs, even in 1868, was melancholy enough. The Egyptian Government had contracted to supply work in the mines at a stipulated daily rate of payment. For the protection of the colony, as well as for the maintenance of discipline among the workmen, a guard of twenty-five soldiers was kept at Gimsah; this was rather

a superfluity, since the Egyptian workmen, once taken into service, could not easily escape. They were hemmed in on one side by wide deserts, which could not be traversed in a day; and as for danger on the other from the Bedouins, none could be apprehended. A report about the Bedouins, which was current at Suez, could not fail to awaken my interest. The passengers of a mail steamer, which had lately foundered at the entrance of the Gulf, maintained that they had seen on the opposite mainland a body of wild men 200 strong, looking out for booty and for plunder. Assuredly by no exertions could the Bedouins collect such a force in the course of a few hours. Poor sons of the desert, I knew them better! An exhausted stomach, shrivelled up on their long wanderings till it is like an empty water-bottle, is the only voice in their naturally harmless character which could excite to violence. Give them a couple of handfuls of durra-corn, and you have made them the best of friends. Their desire for plunder is limited to the robbing of turtles' nests, and the taking of eggs from the neighbouring islands.

Protected by numberless coral-reefs, the coasts of the Red Sea everywhere afford to small vessels the most comfortable harbours and anchorage. Here a short stone quay sufficed as a mole for moorage, and close behind was a grotto-like cistern in the rock, into which the water could be pumped by means of pipes connected with the reservoirs in the ship. On the narrow border of land between the foot of the rock and the sea, were erected huts of planks for the workmen, and barracks of stone for the officials of the Company. Such was the little piece of land on which the colony, composed of representatives of many a nation, prolonged its deplorable existence. Bounded in front by the dreary expanse of sea, which was rarely enlivened by a solitary sail, shut in behind by the sun-scorched gypsum, they were thus exposed to a double share of direct and reflected rays. The atmosphere in which they toiled was burdened with the

stifling fumes of sulphur, and oppressed with the perpetual odour of burning petroleum; not alone the welfare, but the very existence of the colony, was dependent on the safe return of the steamer which provided them with food and drink. Whoever has lingered here can form some conception of the endurances of the poor beasts in our zoological gardens, which have been brought together from every zone, and caged in hopeless imprisonment. So monotonously and void of joy did the days of these wretched miners pass away; they led a life more gloomy than monastic, which might almost recall the first century of Christendom. Perhaps such a life belongs to the air, for it may be remembered that the renowned convents of St. Paul and St. Antony are distant but a few miles to the north-west; they are remnants of the oldest convents that are known, and to them, as often as a patriarch is required, does Egypt, according to ancient rule, ever turn to supply the vacancy.

In reality the colony of Gimsah, when approached from the sea, did present quite the appearance of a monastic settlement in the heart of a desert. Caverns were hewn in all directions, in order to work the veins of gypseous spar containing the sulphur, and amongst them lay a row of twelve hexagonal little houses, which were the kilns, built after the Sicilian fashion, and which might at first be mistaken for the cells of pious monks. To crown the denial and privation of this existence, the Company, under the pretext of maintaining discipline, order, and morality among the miners, had peremptorily banished all women from the sulphur coasts. This restriction was especially irritating to the French, and as a refinement of cruelty was as intolerable as those poisonous fumes of pitch and sulphur which were here set free from the bowels of the earth. Nevertheless it would seem to have answered well, for young and old, Arab and European, went through their work with a diligence such as is rarely to be observed in other tropical regions.

Only when the sun's heat after midday was most insupportable, was there a cessation of labour. At 12 o'clock, when the *employé* of the Suez Canal, in his period of repose, sauntered into the coffee-house to take an ice or to enjoy a game at billiards, the untiring director began his daily circuit of inspection; and seldom has a quotation seemed to me more apt than that in which he said that the hour was come in which he must surrender himself to the sulphurous and torturing flames.

After staying twenty-four hours in the harbour at Gimsah, the 'Prince Mohammed Tawfik' continued its voyage to Djidda, where it arrived on the fourth day. At that season, when no pilgrims were coming or going, we found the harbour all but deserted; only one French and two Egyptian men-of-war were in the security of the roadstead. I easily obtained an open Arab boat, which I hoped, under favourable gales, should convey me to Suakin.

On account of the prevalence of north-winds through the greater part of the year, navigation in the Red Sea is nearly always as easy in this direction as it is difficult in the contrary. This accounts for European sailing vessels so rarely reaching Suez; they proceed only as far as Djidda, and that only when coming from India or at the time of the pilgrimage.

I had to spend two hot days on board while my baggage was disembarked. Whoever has been to India knows well enough what is the furnace temperature of the Red Sea, and how, south of the tropic of Cancer, it becomes insufferable. The thermometer stood at midday at about 95° Fahrenheit, and the air was like a vapour-bath. The sea water, a few degrees cooler, afforded us, nevertheless, some refreshment, and we did our utmost to enjoy it at all hours of the day. Still there was something very enervating and depressing about this amphibious life. Had the heat and sun-glare been less overpowering, we might have truly enjoyed the splashing

and sport in the bright green floods which spread over the shallows where coral banks ranged themselves below, and where the eye could detect a thousand marvels. Like terraces filled with the choicest plants, the sloping beds of coral descended with variegated festoons into the purple shades of the deep; strange forms were witnessed in these living groves, and conspicuous among others was the "bride of the fish," which is celebrated in the Arabian fishing-song, "O bride, lovely bride of the fish, come to me." Ever and anon on my voyage, which was to me as an Odyssey, did I delight to catch fragments of this song, as it was dreamily hummed by the man at the stern during the hot midday hour when the crew had sunk into slumber, and while, noiselessly and spirit-like, our vessel glided through the emerald floods. The enchantment, as of a fairy tale, of these waters with their myriad living forms of every tint and shape, defies all power of description.

Without entering the town, I lost no time in putting off to sea in my little Arab craft. At first we made little headway, but after noon a fresh breeze came from the north-east, which continued all night, so that by the following morning, after a voyage of nearly 100 miles in twenty hours, we slackened sail under the mountains which I had previously visited, in lat. 21° N. The Nubian coast was almost close in front of us. A very primitive kind of compass enabled us to steer to this goal. I was glad to find that no water had reached my baggage, for in the heavy sea the boat had rolled and pitched considerably. We ran along the coast, and each familiar scene revived in me pleasant memories of my former journey, which had been unmarred by a single trouble. Close in view was Cape Roway, where the formation of a lagoon had developed natural salt-works, from which is obtained the salt for the consumption at Djidda, and for export to India. The salt, however, is only secured during the eight hottest months of the year, when the Red Sea is reduced to its

lowest level, two or three feet below its altitude in the winter. The only explanation of this phenomenon seems to be the prevalent direction of the wind taken in connection with the position of the water. The bearings of the sea are such that the wind drives the waves with full force towards the Straits of Mandeb, the narrowness of which retards the outflow of the water and produces an immense evaporation.

The flat shore between the mountains and the sea with its coral reefs was hidden from our view. A green carpet of samphire covered the coast for miles along the land. This botanically may be represented as coming under the genus Suæda, the name of which is imitated from the Arab "sued," the original of our "soda." This plant has long been turned to a profitable account, and to this day Arab boats may be seen about the coast, engaged in the procuring and preserving of it.

Rising directly out of the water close to the shore grow in patches great clusters of Avicennia, so abundant in tropical seas, the beautiful laurel-leaf of which forms a dazzling contrast to the bare brown of the mainland.

Over considerable tracts at the depth of thirty feet the sea bottom resembles a submarine meadow, rich with every species of sea-grass: in these, turtles and dujongs, which are so numerous in this part of the Red Sea, find their pasture land. It must be a very protracted business for these cumbrous creatures to get their sustenance, bit by bit, from these tender leaflets; but they have time enough and nothing else to do.

The little islets in the height of summer are the resort of flocks of water-birds who go there to breed undisturbed. On one of these, in July 1864, we collected over 2000 eggs of the tern, although the dry area above the strand consisted of scarcely so many square feet. At the approach of night the wind failed us, and with fluttering sails we drifted into sight of a place called Durroor. Two antique Turkish guard-houses of small dimensions gleamed with their white walls far across the sea. They are not unlike the rough-walled watch-towers

of our fortresses, and are said to have been built by Selim II. when Yemen was subdued; they are the scanty remains of a past which continues to the present, isolated memorials of a barren, inhospitable coast, where all is changeless as the rolling waves.

I shall not easily forget the nights which I passed becalmed upon that sea. Sleep there could be none. Drenched in perspiration, one could only sit by his lamp and indulge the hope that the breeze at daybreak might be somewhat cooler. Air and sea combined to form an interminable mass of vapour through which the moon could only penetrate with a lurid silvery gleam. One bright strip alone cleaves itself a way over the silent waves; it stretches towards an aperture in the horizon, which would seem to be the origin of all the brightness: but all is full of strange illusion, for the moon is here above our heads. The boat floats as though it were an aërial vessel in a globe of vapour; the depth of the sea, illumined by the vertical beams of the moon, is like another sky beneath us, and hosts of mysterious beings, diversified in colour and confused in form, are moving underneath our feet. The calmness of the air and the unbroken stillness of this spectral nature increased the magic of these moonlight nights.

Late in the evening of the third day we ran into the harbour of Suakin. This town, formerly held directly subject to the Turkish power, had three years since, together with Massowa and the adjacent coast, been surrendered to the Viceroy of Egypt. In that short time it had remarkably improved. Formed by nature to serve as a harbour for the Egyptian Soudan, and even for Abyssinia, the place, as long as its administration came from Arabia and Constantinople, could inevitably never rise, and even now its prosperity is only comparative. The Egyptian Government still obstructs all traffic by the heavy duties which it levies even on the natural intercourse with Suez; it is desirous of transferring its interests as a centre to Massowa, watching continually

with attentive eyes the ungoverned condition of Abyssinia. Since the traffic on the Nile by way of Berber ever continues in uninterrupted activity, and this place lies but 200 miles from Suakin, whilst the distance between Massowa and Khartoom is twice as far, why any preference should be given to Massowa is altogether incomprehensible.

I was now visiting Suakin for the fourth time, and the Governor received me very graciously as an old acquaintance. He sent immediately for some camels, which I required for the continuation of my journey. He himself had to leave the town on the following day to visit his summer abode in the neighbouring mountains. There still remained to me four months before commencing my real journey from Khartoom, as the voyage up the White Nile could not begin until December or January; I resolved to fill up the interval by a tour through the mountains of South Nubia, for the purpose of accustoming myself to the heat and fatigue of a harmless climate, before exposing myself to the fever atmosphere of Khartoom and the Upper Nile districts. Just at this time of year, too, the valleys between the Red Sea and the Nile promised me a rich booty, and I hoped to obtain a remuneration for any toil on my part by the botanical varieties which were to be looked for on the elevated ridges. I could not do otherwise than rejoice in the prospect of escape from the glowing oven of Suakin towards the western horizon, where the mountain-chains, veiled in grey vapour, betrayed the refreshing rains which favoured the district and rendered it so preferable for my sojourn. At night was heard the roll of distant thunder, and the darkness was broken at intervals by flashes of lightning.

On the 10th of September at daybreak all was ready. After the lapse of two years passed in the domestic comforts of Europe, it is not altogether easy to remount the "ship of the desert." Our first day's march was through a trying country. The plain indeed was uniformly level, but for

twelve miles it was covered with such huge black boulders glowing with the heat, that progress was very difficult. After we had proceeded about nine miles from the town, we made a short midday halt under the miserable shade of some dry acacias, which were like the uncovered skeletons of parasols. As if in despair they stretched their leafless branches towards the sky, and seemed to implore for water. Exposed here in a leathern pipe to the wind, our drinking water soon cooled down to a temperature about 18° below the surrounding atmosphere.

The coast plains, although practically level, evidently slope very gradually down to the sea, for after a few hours' march the town is seen like a white spot far below. Beyond is the expanse of sea, which melts into the horizon. The coast-ridges are on an average from 3000 to 4000 feet high, but occasionally single peaks may rise to an altitude of 5000 feet. At one time they appear like a lofty wall, rising abruptly from the slanting plane; at another like separate piles of rock picturesquely grouped behind and over one another. Our route awhile across the narrow promontory now lay along the enclosure of a valley bounded by sloping walls of granite. After twelve hours' perseverance, on the afternoon of the following day we reached the first mountain pass, about 3000 feet above the level of the sea.

Infinitely refreshing was it to ascend at every step higher into the mountain atmosphere, and to be raised above the vapourous heat of the suffocating shore. There seemed a requickening energy in every breath of air, as gratefully it circulated on the heights. The real charm of such a change could not be appreciated more than on the first night of camping-out. Comfortably stretched upon the clean smooth stones which form the valley, the weary limbs could find repose; through the silent night the stars shed a bright and kind encouragement; there was an aromatic odour floating refreshingly around, for, impregnated with camphor, mint,

and thyme, the air was laden with scents which the stores of the perfumer could not rival, and such as no quarter of the globe could surpass. The plants which exhale the welcome aroma are little obscure mountain weeds, amongst which a "pulicaria" plays an essential part. Noiselessly and like spectres glided the camels on their soft feet through the valley, rejoicing in the pasture, sweet and luscious after the scanty herbage of the shore, where for them all was dearth and salt and bitterness.

Solemnity reigned throughout nature; no discordant cry of mountain-bird, no howling beast of prey, disturbed the traveller: there was only the delicate song of the desert cricket to lull him into peaceful slumber.

The mountains between Suakin and Singat afford a habitat for such numbers of remarkable plants that they appear for their variety alone well worth a visit. The most striking forms which arrest the attention of the uninitiated are the Dracænæ and Euphorbiæ, remarkable as both are for their fantastic shapes. They flourish on the loftiest heights, but are found 2000 feet below towards the valleys. The first belong to those types of vegetation which (as though they had been carried in the air and dropped from another world) are limited to extremely narrow sections of the earth. The first dragon-trees (*dracænæ*) which were observed in the African continent, are those which are to be found on these mountains alone, and even here only over an area of a few square miles.* The Nubian dracænæ, being only from 15 to 20 feet in height, are dwarfish in comparison with their famous sister of Orotava in Teneriffe, but in other respects there are only minute and subtle distinctions between them and those which are found in the Canary Isles. In the language of the native nomad tribes of the Hadendoa and

* These appear to belong to the same species which Wellsted ('Travels to the City of the Caliphs,' vol. ii. p. 286) observed on the island of Socotra and ('Travels in Arabia,' vol. ii. p. 449) on the south coast of Arabia.

Bishareen, the dracæna is known as "To-Omba" or "T'Ombet." The leaves afford bast for cords, the long flower stalks serve in June as excellent food for camels, whilst for goats they are almost poison.*

Another remarkable feature of this mountain-district is the large number of succulent plants, the fantastic forms of which here appropriately adorn the craggy walls of the valley, and supply a needed decoration to the more barren rocks of Southern Nubia.

In Abyssinia itself neither euphorbiæ nor aloes are ever found at an altitude of less than 4000 feet. Here, beside the giant Kolkwal, they are found much lower towards the valley. Four smaller kinds of the same species, as well as some remarkable Stapeliæ (which resemble the cactus type of the euphorbiæ), flourish to the very summit of the mountains. Found in company with them is a wild unearthly-looking plant called the Caraïb (*Bucerosia*), of which the branches are like wings, prickly and jagged round the edges like a dragon's back. They produce clusters of brown flowers as large as one's fist, which exhale a noxious and revolting smell, the plants themselves being swollen with a white and slimy poisonous juice.

No space may be found to enumerate all the varieties, but I must mention the Seyleb (*Sanseviera*), whose fleshy tender leaves provided the Nubian nomad with the ordinary material for the cords with which he binds their burdens on his camels. These leaves in shape are not unlike the Nile whips, and on that account may readily recall and stir up painful memories to the poor Nubian of the kurbatch of the Turks, whenever he may chance to see them. So richly burdened are the hanging rocks with the varieties of rarest

* The accompanying plate gives a faithful representation of the stiff forms of the dracænæ, surrounded by the still more rigid complications of rocks in the height of the pass. In the illustration, besides the dracæna, may be seen the Kolkwal-euphorbiæ, and in the right hand corner the Caraïb.

plants; so large and multiform is the exhibition of scarce and novel succulents—that the greatest enthusiast could hardly fail to be bewildered. As a most interesting development of structural peculiarity, the Lassav, one of the Capparids, demands some notice. It produces flowers which take a form quite unique. A drawing taken from nature

The Lassav (*Capparis galeata*).
(Illustration two-thirds of natural size.)

shows the strange deformity of the petals, a double cluster of which is attached to the one broad sepal, so as to produce the effect of two handkerchiefs in one pocket.

This rich covering of vegetation is, however, confined to the side of the mountains towards the sea; on the other side, as soon as the second pass is left behind, the rocks are

bare, and only the lowest part of the valley is covered with anything of luxuriant verdure. Acacias, growing so closely as almost to form a hedge, and gigantic clumps of the grass-green Salvadora, shoot up like great dishes of green salad from the cheerless space around. The moistening vapour of the sea does not reach here to clothe the parched and naked rock. Such were the valleys through which on the morning of the third day we passed on to complete the first stage of our wanderings. Towards midday, after marching for nineteen hours, we had reached Singat, the summer retreat of the town Bedouins of Suakin.

The valley of Singat is about a league in breadth. It is enclosed by two lofty mountain chains running parallel to the coast, apparently joined by a number of projecting spurs. On the broad sandy bed of the valley were erected scarcely less than 500 of those Bedouin tents, of which the shape, in their drooping folds, may be compared to what we see in the breast of a roasted fowl. Here, at least a quarter of the population of the town, which reckons 3000 souls, passes the season of refreshing rains. Later, when the mountain valleys are again dry and destitute of pasture, these transient habitations are carried back again; and the camels and goats must find their pasturage on the slopes in the vicinity of the town, which are exposed to the action of the damp sea air.

Here, at his usual resort, I met Muntass Bey, the Governor of Suakin. His residence consisted of a Sammor-acacia, with foliage wide-spreading like a parasol. Under the shadow of this commodious and airy roof, common to all, was served the midday meal. Some tents in the immediate proximity were provided as places of refuge from the rain. A storm of unusual violence broke over us in the course of the day, and changed the centre of the valley into a foaming torrent, 200 paces wide, for three hours; the flood rushed onwards with unabated strength and sought the sea. I found shelter in a guard-room built of blocks of stone and clay, the quarters

of the garrison of 200 Bazibozuks. After the rain the temperature was lowered to a refreshing coolness, and on the following morning I rejoiced to register a temperature of 68° F.

Whilst I stayed in Singat, I always at dinner-time found an open table beneath the Governor's great tree. This was rendered enjoyable not more by the skill of the cook than by the harmony of the Egyptian singers, whom the Bey had in his suite. The camels, which I had hired in Suakin, were meanwhile sent away to the pastures in the neighbouring valleys, to be recruited against their approaching fatigues. The camel drivers were by no means in a hurry to start, as time was not of the smallest value to them. A trip of five days in the lofty mountains of Erkoweet, eight or ten leagues to the south-east of Singat, unclosed to my researches the vegetable treasures of this most northerly spur of the Abyssinian highland, hitherto unexplored; and was full of enjoyment, equally beneficial both to mind and body.

Erkoweet is another summer retreat for the people of Suakin. The valley in which the tents are pitched is called Harrasa, and discloses the whole flora of the Abyssinian highland in wonderful and complete luxuriance. Euphorbiæ and dracænæ deck the mountains in masses which might almost be reckoned by millions, so that the slopes in the distance have the appearance of being covered with huge black patches. From amongst innumerable projections of granite, mostly dome-shaped and adorned with charming foliage, there juts forth one huge slanting mass of mountain, which is probably the highest elevation of the district of Suakin, if not of the entire chain which runs along the coast. I ascended this peak nearly 6000 feet in altitude, and was amply repaid for the exertion by the magnificent prospect before me. There was extreme enjoyment in the freshness of the air. The whole contour of the coast lay stretched in clear and perfect outline. The whole confused system of the mountains of the coast lay like a map below my feet. In a

circumference of seventy miles I plainly recognised single masses, so that the peaks known to me in my earlier visits served as landmarks to inform me of my true position.

As the result of several favourable meteorological combinations, there exists in these loftier elevations a more luxuriant development of vegetation than in any of the neighbouring mountain districts of South Nubia, which have a lower altitude. This is illustrated very plainly by the clusters of beard-moss (*Usnea*) which hang on every twig and branch, by the abundance of sulphur-coloured lichens on every mass of rock, and likewise by the formation of numerous luxuriant beds of moss. Mosses are generally deficient alike in Egypt proper and in Nubia, and are scarcely seen in the trenches and clefts of the Nile valley; their existence is dependent on a minimum of moisture throughout the year, which is there but rarely reached.

At Erkoweet I found again the wild olive tree, which I had already discovered some years previously on the mountains by the Elbe. I noticed that it assumes the same low bushy shape here, and bears the same box-like foliage, as it does on the coast ridges of the Mediterranean; when the two are compared they exhibit a general identity, so that I conclude the African and European are of the same family. The olive tree, it is well known, is reckoned, like the fig tree, as originally a product of the frontiers of Asia; in remote antiquity, it was reverenced by Semitic nations, and cultivated until it bore a rich produce. This type of vegetation fails completely in the interior of the continent. In the time of Homer the olive grew wild on the islands of the Grecian Archipelago, and it is still to be met with, though in an altered condition, on the coasts of Syria; but here on the Red Sea it has remained unchanged for thousands of years, and the famous classical tree of myth and song is still undisturbed in the dreams of its youth.

A bare boulder-flat of black hornblende stones, extending

several miles, divides the mountains of Erkoweet from those which bound the valley of Singat on the east. The broad water-courses which run between, show what must be the prodigious volume and violence of the currents which occasionally rush downwards to the sea. These deep water-courses are, however, only periodically filled, and then only for a few hours, in the course of the year, so that for some months they are adapted for the cultivation of corn. Notwithstanding, there was here but a very limited cultivation of sorghum, the Arabian durra, since there is a difficulty in securing labour. The idle nomads have no disposition for agricultural employment, although famine in dry seasons, when the flocks can nowhere find sufficient pasture, brings back its recurring calamity. In the year before my last visit, in the valleys about Singat alone, seventy men had died literally of hunger, after vainly endeavouring for weeks to subsist upon wild purslane.

All water-courses, with a supply of moist soil upon the ground just sufficient for a few months, although they are not enclosed by heights like valleys, are comprehended within the Arab designation "el wady." Cheerless through the dry season, after the first rain their level sand flats are clothed with the most luxuriant flora; fresh springing grasses put forth their little cushion points, and give the sward the appearance of being dotted with a myriad spikes; then quickly come the sprouting blades, and all is like a waving field of corn. Halfway between Singat and Erkoweet we halted in a wady of this character, which bore the name of Sarroweet. What a prospect! how gay with its variety of hue, green and red and yellow! Nothing could be more pleasant than the shade of the acacia, nothing more striking than the abundance of bloom of the Abyssinian aloe, transforming the dreary sand-beds into smiling gardens. Green were the tabbes-grass and the acacias, yellow and red were the aloes, and in such crowded masses, that I was involuntarily

reminded of the splendour of the tulip beds of the Netherlands; but here gardens lay in the midst of a waste of gloomy black stone. One special charm of a desert journey is that it is full of contrasts, that it brings close together dearth and plenty, death and life; it opens the eyes of the traveller to the minutest benefits of nature, and demonstrates how every enjoyment is allied to a corresponding deprivation. Richly laden with treasures I returned to Singat, where I remained until the 21st of September, and during my stay I had once again repeated opportunities of studying my old friends the people of Suakin in their domestic relations.

The coast lands on both sides of the Red Sea offer a striking likeness to each other, which does not consist in physical resemblances alone. The people are the same in feeling and in manners, however much the true Ethiopians, such as the Bishareen, Hadendoa, and Beni-Ammer, may differ in language and descent from the true Arabs; I say from the *true* Arabs, because the term Arab has been at times too indiscriminately applied, and ought to be limited to the nomads in Arabia, as distinguished from the settlers. On both coasts the inhabitants follow the same character of life. They are people of the deserts, wandering shepherds, and procure whatever corn they may require from external sources. Even the town life of the Arabs is essentially half a camp life. As a collateral illustration of this I may remark that to this day in Malta, where an Arab colony has reached as high a degree of civilisation as ever yet it has attained, the small towns, which are inhabited by this active little community, are called by the very same designations as elsewhere belong to the nomad encampments in the desert. Half Suakin is like a desert camp, and for this reason I have called its inhabitants town Bedouins.

These town Bedouins are people whose only distinction from the Bedouins of the mountains is that their dress almost always is of a spotless white; the true sons of the desert, in

consequence of their continual camp life, have long toned down the colour of their single garment, never washed, to a brownish-grey, quite in harmony with the general hue of the surrounding country. Many very beautiful faces, perfectly regular in feature, are to be found amongst these swarthy Bedouins, whilst a wonderful dignity and elegance mark their movements. Like the inhabitants of Hedjas and Yemen they chew tobacco, and find recreation in various amusements which are unknown to the mountain Bedouins. All alike, however, have in common the same single aim of existence: to do as little as possible, to sleep much, to drink goats' milk, to eat sheep's flesh, and finally to scrape together all the Maria Theresa dollars that they can; the latter is a matter of some difficulty, on account of their natural idleness. Black female slaves instead of asses, which in Suakin would cost too much to feed, are indispensable to them for carrying water from the well to the town. Whoever possesses fifty dollars in his bag and has one slave besides his water-bearer, is quite a magnate, and spends much labour in the profuse adornment of his hair. When he is not sleeping, that is to say, in the cool hours of the morning and evening, he takes his walk, always bareheaded and with high-towering locks, here and there on the road joining in a conversation or conferring the favours of his weighty counsel. When it becomes too hot in Suakin, and the goats give no more milk, after the last weed has been devoured, and the last tundup (sodada) eaten to the roots by the camels, they leave the cob-webbed thorn hedges of their farms, pack together the acacia-rods and date-mats, the materials of the tent, and withdraw to the mountain pastures, which they retain by ancestral right. After them follow the Turkish soldiers, who roam through the valleys, switching their kurbatch, and proceed to collect the taxes levied in proportion to the number of cattle. The services of these officials in return are enlisted to re-capture any camel stealers who

may be seeking to escape to the remote solitudes of the mountains.

On the 21st of September I resumed my journey towards the Nile, a further distance of 175 miles. On the way my little party, which, besides the camel drivers, consisted of only a native of Berber and a dog which I had brought from Europe, was increased by falling in with two young pilgrims on their way from Mecca. I was unable to complete my proper retinue until I should reach Khartoom, since the men who had offered me their services in Egypt appeared so weakly that I considered them unfit for undertaking any journey into Central Africa. The addition therefore of these two blacks for the approaching march of sixteen days through mountain solitudes was very welcome. Their armour consisted of a Turkish sabre, and this, together with my gun, seemed completely sufficient protection against the natives, whom Sir Samuel Baker a few years before had so successfully mastered with the help of an umbrella, that a considerable number of them voluntarily laid down their arms. The vigilance of the dog was a security against any nocturnal attack, and indeed, at two different times he had given warning to my little caravan just at the right time.

Less welcome to me was the company of a disagreeable old fanatic, who, followed by two wives, was on his return journey from the Holy City of the East to his home in the far west. He was a priest from Kano in Haussa, and when he told of the wonders of the world which he had seen on his long journeys, I could always set him right, having really seen infinitely more than he had. I completely non-plussed him by my geographical knowledge of the Western Soudan, and after the details which I gave of that country, he was, however reluctantly, at last obliged to believe that I had actually been there. But any friendship between us was rendered impossible by the constant noise and contention caused by his wives. All amicable relations came utterly

to an end when I found myself driven as I did to come forward as the champion of the oppressed. Of the priest's two wives, one had faithfully followed her husband from his home, and now saw herself supplanted by the other, whom the priest had married at the tomb of the Prophet. The fellow had begun to impose on his first wife in the most shameful manner by the withdrawal of every choice morsel and of every harmless indulgence; consequently the two women were continually quarrelling, and literally laid on to each other by the hair. The man himself always took the part of the new wife, and cruelly maltreated the old. At last it became too much for me to be the daily witness of such revolting scenes, and I took the old sinner to task, and tried to inculcate in him due ideas of woman's rights and dignity, so that he could tell his countrymen in Haussa what we thought on such matters. The indifferent camel drivers and the still more indifferent camels, both alike as unmoved as the black rocks in their solemn stateliness, alone surveyed this little tragedy. Whoever has to travel through deserts should endeavour to be free from such rabble and useless retinue. A large company is troublesome on account of the scarcity of shade, since there is not always time at the halting-places to pitch a tent, and one must avail himself of the few larger trees which exist in the valleys.

A stiff ascent of the road at a short distance from Singat led westwards to the water-shed between the Nile and the Red Sea. The elevated pass is rather to the rear of the defiles on the Suakin side. We then descended to a very broad wady full of pasture, called O-Mareg, which was a third summer retreat for the natives of Suakin. In the middle of a green valley, two miles broad, some fifty tents were erected, all under the surveillance of a Turkish captain with some soldiers to look after the interests of the Government. Great herds of camels, cows, sheep, and goats, and amongst them several hundreds of asses, were grazing in every

direction. The Wady O-Mareg does not form, as might be expected, a tributary of the great mountain-river Langeb, which at its recurring period joins the Barka, but takes its course direct to the Atbara, as do all the larger water-courses of the ensuing road.

In consequence of the repeated storms of rain, at the time of my journey there was water in nearly all the valleys, and everywhere there was abundance of pasture for the camels. The drivers accordingly chose a more direct road running to the south of the ordinary route of the caravans. This enabled me to fill up my map with many new details. As a general rule the drivers followed the rule of never, if possible, encountering the native shepherds on the road. Although they were of the same race, they feared the conflicts which were frequently unavoidable in the neighbourhood of any wells. I was not surprised at their timidity, as I had myself experienced some difficulty in my former tour.

Having crossed the third chain, we reached the great wady Amet, which is bounded on the north by Mount O-Kurr, a colossal mass visible as a landmark in the west for a whole day's journey. The predominating rocks are greenstone in several varieties, although beautiful serpentine is far from infrequent. In one part of the valley rises a homogeneous mass of splendid porphyry nearly 1000 feet in height, brilliantly marked on its surface with veins of Indian red. From the prevaence in these mountains of greenstone, which no doubt often contains a grass-green stratum, the conclusion must not be drawn that green is at all a prevailing colour of the walls of rock. This is by no means the case; indeed, nearly all kinds of rock, however diverse they may appear when broken, are covered externally with an uniform dark brown, which obliterates all distinctive shades. In its interior the greenstone is unpolished and of bright colour. A superficial accretion, the cause of which remains hitherto unexplained, forms itself on every fragment and

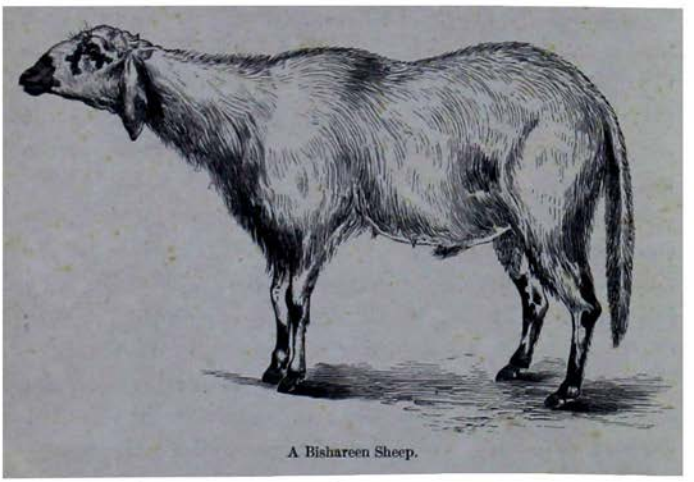
gives a coating about a millimeter thick, in colour not unlike a bright brown cake of chocolate.

In Wady Amet we lighted upon some sorghum-fields, which seem to have been planted out, like those at O-Mareg and Erkoweet, by way of experiment; but in reality they here represented the whole exertions of the idle inhabitants of the desert. Some primitive huts, heaped up in Cyclopean rudeness, bore witness to the stability of this rendezvous of native shepherds. We were here amply provided with milk and meat, goats and sheep being alike abundant in the neighbouring valleys. Camel-breeding is not carried on here so much as in the northern parts of Etbai, as the whole district of the Bishareen between the Nile and the sea is called; the breeders avoiding the proximity of the great roads through fear of the foraging and reprisals of the military.

The goats of the country form a small race of their own and belong to the comprehensive variety which is called the Ethiopian. Differing from those of the Nile valley, they are again found among all the nomad people in the interior; the goats of the Dinka being a larger kind of the same character. The Ethiopian goat may be reckoned among the most agile and elegant of the race, and it might be called the climbing goat, since it prefers to feed on the young shoots of the acacia, and for that purpose often climbs up the slanting stems or low-growing branches. A large flock occasionally groups itself round a tree with pendant branches: in that case, the animals are rarely seen in any other position than standing upright on their hind legs, and give at a distance an impression that they must be a crowd of men. Others may be observed in grotesque attitudes, with legs straddling, hanging in mid-air, and weighing down the boughs of an acacia.

The Bishareen keep larger flocks of sheep than of goats; the breed is very peculiar, marked by distinctions which

might almost constitute a nationality. The Etbai race is closely allied to the thick-tailed species in all general characteristics, but distinguished by the lissome condition of its long and bushy tail. The fleece is hardly worthy of being called wool at all, for it simply consists of rather long straight hair. Almost all are perfectly white, except (and this is the chief mark of distinction in the species) on the ancles and mouth, which are covered with black hair. The usual price in the country for such sheep never exceeds a Maria Theresa dollar (four shillings), whilst young lambs



A Bishareen Sheep.

cost but half this sum. Cattle are found only in the environs of Suakin and on the road to Taka, lying further south than the one on which we travelled. On the route which we took, in consequence of the smaller rainfall, the pasture necessary for their maintenance is not permanent throughout the year, like it is in the lands adjacent to the Barka basin. In the next district we crossed a high level, intersected by numerous water-courses deeply worn amidst the stones and rubble. The most considerable of all these water-courses periodically flowing to the south-west, was the

Wady Arab. The dry bed of this was bounded by shelving banks from 40 to 50 feet in height, and the ascent was steep enough to demand no small exertion from our laden camels.

Here grew in great abundance the plant, a species of Scrophulariaceæ, to which my own name had been assigned (*Schweinfurthia pterosperma*). It met me as a greeting from my distant home. In itself it is but an insignificant little weed, but upon its discovery, Alexander Braun, the celebrated professor of the University of Berlin, had named it in my honour—a little token of remembrance, which, according to the tribute of Linnæus, may be more lasting than any memorial in brass or marble.

A hollow, as of a saddle-seat, between the mountains led us over the chain, unbroken by a pass, of the fourth of the parallel mountain ridges which, with many branches, traverse this part of Africa. To the right on the north we left Mount Wowinte and the peak of Badab in which it culminates at an altitude of 5000 feet. The road then descended into the wide plain spreading to the west of this height, where a magnificent panorama opened to the view. Next we reached the Wady Habohb, a watercourse of which the breadth was about 400 feet. Proceeding across Wady Kokreb, two miles wide, we arrived at length at the equally wide Wady Yumga. By this time we were on the next line of the mountain range, in which is situated the much frequented well of Roway, a rendezvous for all the nomads who wander in the neighbouring localities. Here, by order of the great Sheikh of the Hadendoa, a tribute, sanctioned by the Egyptian Government, is levied on every caravan that passes.

My lazy camel drivers used every available opportunity to prolong the duration of the journey. For my part I was indifferent to this, as I had time at my disposal, and my enjoyment of the flora fully occupied me; my companions,

however, were not so patient. They longed for their cherished Nile to put an end to this camp-life in dreary deserts. At length even my own forbearance was exhausted; the excuses became intolerable: at one time the camels had run away, at another they wanted food, so that it grew up to a regular fight between us four and the dozen Bedouins who were conducting us. Some sticks, the single Turkish sabre, and an indestructible pipe tube, which I swung in my hand, were our only weapons, but they sufficed to turn the victory to our side. My tube smashed a number of patriarchal shepherd staves, and thus an end was put to the eternal halts and feeds, and we went on towards the west at a better pace. I thought of the proverb that the European in India either learns patience or loses it.

As we followed the Wady Laemeb with the water of its channel now replaced by verdure, we come to O-Fik, the last mountain on the route, beyond which a desert, unrefreshed by a single spring, extends as far as the Nile valley. The last well was that of O-Baek. We lighted here upon some Bishareen families, who were staying temporarily with their flocks in the neighbourhood of the well, and were accustomed after the first rain to sow a considerable piece of ground with sorghum. Amongst the men may be observed expressive features, well developed, unlike ours, yet less unlike them than the other inhabitants of the Nile valley. But more frightful creatures than the women of these nomads there surely cannot be on earth. Of course I speak only of those who have passed the spring-time of their life. They are lean beyond all conception, and as haggard as their goats would be if shorn of their hair, which alone gives any roundness to their gaunt frames. There is nothing about them even of that natural delicacy of many savages which makes the children of the desert appear like the gazelle, which is clean, though it never bathes. Physically and morally they are loathsome; toothless, mangy, inquisitive,

and chattering; in a word, they are the very incorporation of the infirmities of senility.

From this place it required an energetic march of twenty leagues to reach the first well on the confines of the Nile-valley. The road, now formed by numerous pathways running closely side by side like cattle-ruts, crossed a great boulder flat in a W.S.W. direction. The pack-camels proceeded side by side in phalanx, as upon the open lands they rarely march in single file. There were sandy watercourses ever and again intersecting our way, and groups of hills meeting the eye in the horizon.

On leaving O-Baek we had next to traverse the plains extending to the west of the wells; formed of the finest

Aboo-Odfa.

quicksand, blown up into hills often as high as a house, these sands were a considerable impediment to the camels. From the dreary waste of the plain with its loose black rocks, jutted up a solitary block of granite, to which the Bedouins give the suggestive name of "Eremit." An hour's journey

further on there appeared, above the plain by the right of the road, another isolated mass of granite, one of those landmarks visible from afar, which, after the weariness of the desert journey, is ever greeted gratefully by the eye of the long-tried traveller. It is a natural stone obelisk, 35 feet high, in its singular shape resembling an inverted pear or fig. The block is narrow at the base, and evidently in the course of time has been worn away by the action of the sand as it has been driven by the wind.* This monument, the unhewn production of nature itself, is called by the natives Aboo-Odfa, Odfa being the name of a saddle covered with a canopy which is used for women on the camel. Smaller blocks of similar conformation are not unfrequently met with at other parts of the road.

On the grassy bottom of Aboo-Kolod, where, in consequence of the late rain, great pools had formed themselves, we made our last night camp but one. The slopes had all the characteristics of being on the level of the Nile at Berber, whilst the remainder of the road again ascends. The last wady is Aboo-Selem; it was at that time one unbroken sorghum-field, its fruitful soil was already cultivated by the industrious inhabitants of the Nile valley, although the recurrence of the rain would permit the culture only at intervals. At length on the 7th of October we entered the town of Berber. Without loss of time I found a boat on which to continue my journey to Khartoom.

Whilst I encamped at Berber, pending my embarkation on the Nile, I had been unconsciously put into a position of some jeopardy. The native of Dongola who accompanied me as my servant, in order to find the safest place he could to secure the prohibited wares of a Greek merchant from the eyes of the police, had, without my knowledge, concealed under my tent a considerable quantity of gunpowder and

* The sketch on the preceding page is taken carefully from nature.

other explosive materials. Whilst the fellow was away on a visit to town, I had unsuspiciously kindled a fire on the loose sandy soil, in order to perform my cooking operations, little dreaming of the peril which happily I escaped.

My old acquaintance, M. Lafargue, who was settled in Berber as a merchant and presided over the French Vice-consulate, himself an experienced traveller on the Upper Nile, received me with that hearty hospitality which many other desert wanderers have proved besides myself. Sir Samuel Baker aptly compares such receptions to the oasis in the desert. No necessity of letters of introduction here as with us in Europe; no hollow forms of speech, exchanging courtesies which perchance mean the very reverse; no empty compliment of at best a tedious dinner; but here in Egypt the people receive us with free and genial amiability, all Europeans are fellow citizens and everything is true and hearty. "What pleases me the most is the ease with which you travel in this country; you come, you go, you return again, as though it were a walk." Such were M. Lafargue's cordial words to me. We parted well pleased with one another: I shall not see him again.

About the last part of the journey to Khartoom, which embraces the passage up the Nile, and which is sufficiently well known by the descriptions of other travellers, I have nothing new to relate. By the complete failure of wind, much of this portion of my journey was so exceptionally prolonged, that it took sixteen days to accomplish the whole. For the first part of the voyage, as far as Shendy and Matamma, the only considerable towns in this district, the shore offered nothing attractive. It reminded me of the Egyptian valley of the Nile only in two places; the mouth of the Atbara, and one spot where the renowned pyramids of Meroe formed a noble background.

Matamma is a populous town, but extremely slow and dull. The buildings, constructed of Nile earth, are insigni-

ficant in themselves, and irregularly crowded together in a mass like huge ant-hills; not a single tree affords its shade to the dreary streets, which are filthy with dirt.

The *ennui* and the calm which obliged us to lay to here, suggested all sorts of unprofitable vagaries to my servant Arbab. He received from me part of his wages, and took a wife on the spot from amongst the circle of his kinsfolk. The bride, two days afterwards, was given back to herself and her relations, to await indefinitely, for a year and a day, the expected return of her husband. Arbab had already been several times married in Khartoom; and at every return he repeated the same usual, one may almost say, the becoming custom.

The second half of the Nile voyage was, however, rich in the charms of scenery. This is especially applicable to the views afforded by the river islands. These islands are so many throughout the whole extent of the sixth cataract, between the island of Marnad and the lofty mountain-island of Rowyan, that no one pretends to know their precise number, and the sailors call them, in consequence, the ninety-nine islands. This excursion offers to the traveller a most attractive prospect, and the landscapes on shore afford a treat which no other river voyage could surpass. Splendid groups of acacias, in three varieties, with groves of the holy-thorn, overgrown by the hanging foliage of graceful climbers, made the profusion of islands set in the surface of the water appear like bright-green luxuriant and gay tangles. Wildly romantic, on the contrary, reminding one of the Binger-loch, are the valley-straits of Sablook, where the Nile, narrowed to a small mountain stream, flows between high bare granite walls which rise some hundred feet.

So much the more surprising appeared the breadth which the Nile exhibits above this cataract, where it displays itself in a majesty which it has long lost in Egypt. Below their confluence, the waters of the Blue and the White Nile are

distinctly visible many miles apart. It is highly probable that at certain times the level of the streams might show a difference of several feet; the proposed establishment of a Nilometer should therefore take place below the confluence, in order that with the help of the telegraph accurate intelligence of its condition might be remitted to Cairo.

In the Nubian Nile-valley all charm is gone. Extremely wretched is the aspect of the country, and equally pitiable are its present social conditions. In the course of the last ten years, as a consequence, first, of the increased taxation, and secondly, of the diminished production, matters have continually become worse and worse. To the cursory glance of a traveller only a small proportion of this deep-rooted misery may be disclosed; he may perceive the consequences, without being able to assign the reasons; and from the contradictory statements of the inhabitants, he can hardly form a clear idea of the real condition of the country. On the other hand, the complaints of the people give him an incomplete representation of the circumstances, unless he at the same time takes notice of the objections which the Government appears justified in raising against them. Only a thorough knowledge of the country combined with local study would put him in a position to form an opinion. In spite of everything, the fact remains that the culture of the soil is declining, that scarcity is everywhere on the increase, and that distress is consequently more frequent. In the last two months of this year's harvest, the market price of a rup* of sorghum-corn had risen to a Maria Theresa dollar. Three years before, large villages had been pointed out to me, lying completely deserted on account of the emigration of the inhabitants, and now again similar evidence of distress was forced upon my notice. In the district between Damer

* The rup is a measure equal in weight to seven and a half litres, or about five oka, and containing under two English gallons.

and Shendy, the population seemed utterly scared at the increasing emigrations. The unmarried men go to Khartoom in order to be enlisted as so-called soldiers by the merchants on the Upper Nile. The elder people, on the other hand, leave their culture, and with a few sheep or goats endeavour to lead a meagre nomad life as shepherds in the steppes and deserts.

On the 1st of November, at midday, we at last reached Khartoom, and landed on the bank, which was all alive with hundreds of boats. The German Vice-consul, Herr Duisberg, who had shown me so much kindness at the time of my former visit, again received me most hospitably. In his elegant and commodious house, I had every opportunity for rest and refreshment in anticipation of my coming labours.

CHAPTER II.

Kind reception in Khartoom. Dyafer Pasha, the Governor-General. Contract with Ghattas. Herr W. Duisberg. Ivory trade at Khartoom. Khartoom possessions in the negro countries. Departure from Khartoom. Manning of the boat. Construction of the Khartoom boats. First night on the White Nile. Character of the landscape. Washing away of the east bank. Fertility of the country on the west. Acacia forests. Herds of the Hassanieh. Numerous hippopotamuses. Geese and ducks. Beginning of the wilderness. The Ambatch-wood. First day of ill-luck. Running over a wild buffalo. Baggara Arabs. Brethren in the faith. The mountain Nyemati. Evening gossip about pygmies. Native Egyptian cultivated plants. Buffalos alarming the Baggara. Mohammed Kher, the robber chief. Impressions on the first sight of savages. Boat attacked by bees. Frightful agony. Gadflies. Giant snails. A man carries three canoes. Repair of the sail-yard. Fashoda the most southern military station. Fifteen Shillooks at a shot. Gay temperament of the people. Gun accidents. African giant snakes.

In Egypt, in well-informed circles, it was a current opinion that the Government was trying, on principle, to throw impediments in the way of any explorers who might purpose penetrating the district of the Upper Nile. It was supposed that they were desirous of preventing the circulation, by eye-witnesses, of adverse reports, and of keeping back from the eyes of the world any undesirable details as to the position of matters with reference to the slave trade. They were unwilling to let it be seen that their influence over the people of Khartoom was insufficient for the suppression of the slave traffic amongst them. Under this impression I entered upon my journey with some misgiving, entertaining no very sanguine hopes as to the real utility of the order delivered to me for the Governor-General of Khartoom, who

at that time was administering affairs with considerable vigour in all the provinces of the Soudan under the Egyptian dominion above the first cataract.

So much the more grateful, therefore, was my surprise when, immediately after my arrival in Khartoom, I was honoured by a visit from the powerful Dyafer Pasha, and, after the first few words, satisfied myself that there was a reasonable expectation that, on this occasion, the local government would do all within their power to secure the most complete protection to a scientific expedition.

My letter of recommendation from the Academy was afterwards read in the Government divan. It was fluently translated, sentence by sentence, into Arabic by the physician in ordinary, and the Pasha at once declared that he would be the Vokil, that is to say, the manager of affairs, for the Academy of Berlin, and promised that he would not fail to afford me the necessary assistance for my journey. How faithfully he kept his word is well known, and on that account the thanks of the Academy of Science were formally presented to him. Dyafer had been an old captain of a frigate in the stirring times of Mohammed Ali; he was a man of considerable attainments, and had already become known to me on the occasion of my first journey, when he acted as Governor of Upper Egypt. In his house were seen piles of atlases and anatomical plates; he was not wanting in a clear comprehension of, nor indeed in an actual interest in, my undertaking. He expressed his hope that my journey might accomplish its aim, and if anything of material benefit should be discovered that it might not be reserved, but freely communicated to the State. I assured him that the Royal Academy had no narrow views, and that he might be certain that although I trusted by prosecuting science to gain credit for myself, I should not overlook anything that might be honourable to him, or for the advantage of his Government. The Pasha seemed gratified by my reply, and

referred me to the writers, who were to settle the various covenants of my agreement with an ivory trader, Ghattas, a Coptic Christian. The Governor-General himself had arranged the terms, and I could find little in their tenor that would be adverse to my interests.

Besides Ghattas, there were several other merchants in Khartoom, who possessed large settlements in the district of the Upper Nile, but he alone amongst them was not a Mahommedan; the others were, for the most part, true Osmanlis, whose reputation, with respect to slave dealing, did not stand too high. Thus the choice of the administrator fell upon the unlucky Ghattas, who, being also the richest of all, was required to become surety against any misadventure that might occur to the traveller in the interior. If he were betrayed to the cannibals, or if he were left in the lurch among savages and cut-throats, so much the better for the treasury of the Government, who would have the most legitimate reasons for proceeding to the confiscation of his estates.

I should fail to discharge a duty of gratitude if I were to omit to acknowledge the interest displayed in behalf of my enterprise by Herr Duisberg, who was at that time Vice-consul of the North German Confederation in Khartoom. Not only did he entertain me most hospitably for several weeks in his house, but likewise exerted all his influence on his friends the ivory-traders, so as to dispose them favourably to my undertaking, and to relieve them from any fear of interference on my part with their affairs.

Notwithstanding any prejudice which might attach to him as the leader of the Protestant mission, the Vice-consul had gained the esteem of all parties in Khartoom, and was especially in favour with the Governor-General, who very thoroughly appreciated his integrity. His conciliating manners availed to satisfy the Khartoom merchants that my plan was not adverse to their interests. Hitherto they had

looked upon every scientific traveller as a dangerous spy, whose visit only aimed at denouncing their transactions on the Upper Nile, and reporting them to the Consul-General in Egypt. On this occasion they consented to meet me at a sumptuous entertainment given by Herr Duisberg before my departure. All the gentry of the town, Pashas and Beys, glittering with their stars and orders, and merchants, in their gorgeous satin robes, gathered together at that feast of reconciliation between the representatives of African commerce and of European science.

The entire ivory trade of Khartoom is in the hands of six larger merchants, with whom are associated a dozen more whose business is on a smaller scale. For years the annual export of ivory has not exceeded the value of 500,000 Maria Theresa dollars. There has been a continual decrease in the yield of ivory from the territory adjacent to the river, so that last year, even that sum would not have been maintained, unless the expeditions had, season after season, been penetrating deeper into the more remote districts of the interior. It is a fallacy to suppose that the pursuit of elephants is merely a secondary consideration in these enterprises of the Khartoom merchants, or that it only serves as a cloke to disguise the far more lucrative slave trade. These two occupations have far less to do with one another than is frequently supposed. If it had not been for the high value of ivory, the countries about the sources of the Nile would even now be as little unfolded to us as the equatorial centre of the great continent: they are regions which of themselves could produce absolutely nothing to remunerate transport. The settlements owe their original existence to the ivory trade; but it must, on the other hand, be admitted that these settlements in various ways have facilitated the operations of the regular slave-traders. Without these depôts the professional slave-traders could never have penetrated so far, whilst now they are enabled to pour themselves into the

negro countries annually by thousands, on the roads over Kordofan and Darfur.

The merchants of Khartoom, to whom I have alluded, maintain a great number of settlements in districts as near as possible to the present ivory countries, and among peaceful races devoted to agriculture. They have apportioned the territory amongst themselves, and have brought the natives to a condition of vassalage. Under the protection of an armed guard procured from Khartoom, they have established various depôts, undertaken expeditions into the interior, and secured an unmolested transit to and fro. These depôts for ivory, ammunition, barter-goods, and means of subsistence, are villages surrounded by palisades, and are called Seribas.* Every Khartoom merchant, in the different districts where he maintains his settlements, is represented by a superintendent and a number of subordinate agents. These agents command the armed men of the country, determine what products the subjected natives must pay by way of impost to support the guards, as well as the number of bearers they must furnish for the distant exploring expeditions; they appoint and displace the local managers; carry on war or strike alliances with the chiefs of the ivory countries, and once a year remit the collected stores to Khartoom.

Both the principal districts of the Khartoom ivory trade are accessible by the navigation of the two source-affluents together forming the White Nile, viz. the Bahr-el-Ghazal and the Bahr-el-Gebel. The name Bahr-el-Abiad is understood in Khartoom to include the entire domain of the Nile and its affluents above this town, but in its true and more limited sense it signifies only the united mainstream as far as the mouth of the Sobat, "White Nile." Two less important centres are approached by the channels of the Sobat and

* In the Soudan, every thorn-hedge, or palisade, is called a Seriba; in Syria, also, the cane-hedges, for the enclosing of cattle, are termed Sirb, or Sereebe.

the Giraffe. The landing-places, called Meshera, are in all cases at a distance of some days' journey from the depôts. The trade winds and the rainy seasons both have their effect in determining the time of year in which progress can be made. They render the passage up stream practicable only from December to January, and limit the valley journey to June, July, and August. On the Bahr-el-Gebel the extreme point of navigation is the well-known Gondokoro in lat 5° N., the termination of a series of voyages of discovery. On the Bahr-el-Ghazal a kind of *cul-de-sac* leads to the only existing Meshera. Beyond this, the Khartoom people have already advanced 5° in a southerly, as well as in a westerly direction. In the district of the Gazelle River, the Niam-niam countries form a great source of the ivory-produce; of the ways which were available, this was the direction which appeared to promise the best opening for the prosecution of my object. Accordingly, I determined to proceed by the Gazelle, and concluded my contract with the Coptic Ghattas. He engaged to supply the means of subsistence, and to furnish me with bearers and an adequate number of armed men. He also placed at my disposal a boat for the journey, and it was expressly stipulated that I should be at liberty to join all the enterprises and excursions of his own people.

The Governor-General laid similar obligations for my protection on all the other chief merchants who had possessions in the territory of the Gazelle. Duplicates of all the agreements were prepared; one copy being retained by me, the counterparts were deposited with the local government at Khartoom. After these necessary provisions for my security had been adjusted, there was nothing now to hinder me from commencing my real journey. Never before had the Egyptian Government done so much indirectly to co-operate with a scientific traveller; and it was with no little satisfaction that I regarded my budget of documents, which would unlock for me so considerable a section of Central Africa.

In order to have continually about me a number of people upon whose fidelity and attachment I might fairly rely under all circumstances, I took into my service six Nubians, who had settled in Khartoom with their wives and children, and who resided there, and had already travelled in different parts of the Upper Nile. All had previously served under other Europeans. Riharn, the cook, had accompanied the Consul Petherick on his ill-fated journey of 1863. Their conduct in no way disappointed me, and I had never any serious cause of complaint against any of them.

At last, all preparations had so far prospered that the journey to the Gazelle River might be commenced on the 5th of January 1869. A little concession had, however, to be made to the superstitious representations of the Khartoom people. Wednesday and Saturday, as days of ill-omen, were excluded from the times of departure. Somehow or other this introduced a parley which entailed a little delay. Protestations, I knew, availed but little, and my common sense suggested unconditional submission to the custom of the country. Not simply was it impossible to convince the people of the absurdity of any superstition of theirs, but what was of more moment, they would be sure, on the very first occasion of any mischance, to attribute it to the perverseness of the Frank. They would have looked idly and helplessly on if I had persisted in carrying out my will in opposition to the decrees of fate.

On board our little vessel we altogether counted thirty-two, a number small in comparison with that in the other boats. The total number, however, did not admit of much reduction. No boat's crew alone could suffice to overcome the obstacles which were to be expected in the waters further up the country.

The merchant Ghattas, to whom the boat belonged, had manned it with eight boatmen, and had also put on board fifteen hired men to serve, partly as a protection against any

attacks, and partly to assist in towing the boats. The soldiers, as they were called, were for the most part young, and were originally inhabitants of the valley of the Upper Nile, between Berber and Khartoom, but from whence they had been driven to escape on account of the heavy taxation. Since agriculture hardly kept them from misery and starvation, they preferred to hire themselves out as robbers, slave-hunters, cattle-stealers, or whatever could enable them to gratify the innate propensity for adventure which belongs to every Nubian. Besides the six Nubians engaged in Khartoom, my own retinue included two women slaves, whose hand labour supplied the want of mills; their office, performed by means of stones, was to convert our corn into the flour requisite for the maintenance of the crew. We were packed closely enough; cramped up, we appeared like cattle in a pew, yet our accommodation was comparatively spacious. Other boats I saw of which the dimensions were hardly larger than our own, and which were made to carry sometimes sixty, sometimes eighty human beings. But even this was a trifling repletion as compared with the boats we met, and which, in a hold of not more than fifty tons, often stowed away 200 slaves. The crew squat like hens on shelves outstretched upon deck between mast and mast; and in order to afford the soldiers rest by night, the vessels lie-to whenever the shore is safe.

A rough wooden partition erected at the stern of the bulky vessel was assigned to me as my special berth. I had arranged it as well as I could, and sat there surrounded, in charming confusion, by baggage and trunks, and the thousand articles which made up my equipment. The boats which are used upon the upper waters of the Nile are called "negger;" their construction, I believe, is unlike what can be seen in any other country of the world. They are as strong as they are massive, being built so as to withstand the violent pushings of the hippopotamuses, as well as the collisions with

the mussel banks, which are scattered in various directions. I am certain that one of these boats at any maritime exhibition would attract the attention of all who take any interest in such things. I am not aware that there is anything accurate to be found in any history of travel on this subject, and it may be permitted me therefore to insert a few particulars of the Khartoom ship-building.

There can be no question that the ship-building on the Red Sea, just like the architecture of the towns along its coast, is of Indian origin, all the timber required in Arabia being procured from India. At Khartoom, on the contrary, this art, although in many respects it has peculiarities of its own, has been derived from an Egyptian source. Taking their own special requirements into account, the boat-builders of Egypt have completely altered the structure and shape of their river boats. It must be borne in mind that the recurring cataracts, which interrupt the navigation of the Nubian Nile valley, rendered any ascent of the river a matter of difficulty, demanding indeed the most strenuous exertions. The cataracts are ten in number, and only recently have they been overcome by some small steam vessels of about 60-horse power. The only wood which is used in Khartoom for ship-building is that of the Sunt acacia (*A. nilotica*), which, though far heavier and harder than our oak, is the only wood which the soil of the Soudan supplies, which appears capable of being sawn into planks. But on account of the irregular texture and numerous branches of the trunk of this acacia, it is impossible to cut it into boards more than ten feet in length, and even these are rare. Masts and sail-yards, since those of deal seldom reach Khartoom, and then are of an exorbitant price, must be made by splicing together a number of small pieces. Externally these are bound with ox hide; but in violent gales they are extremely liable to start. Not only does the wood fail to be either straight or long, it is also so hard, that it requires to be

sawn while it is green. The saw is an instrument so rarely employed throughout Nubia, that it is handled most unskilfully by the carpenters; as matter of course, there are neither steam-mills nor water-mills in Khartoom, and consequently the planks are cut without the faintest pretence to regularity.

All these defects are, however, cancelled by the unexampled toughness and indestructible nature of the wood; it might fairly be asked from what other material could boats 60 feet long and 20 feet broad be constructed without ribs or braces. The sides of the boat are a foot thick, and are formed of layers of different lengths, which acquire stability and firmness from their own support. An empty boat, seen from inside, has somewhat the appearance of an elongated shell of half a hazel-nut. The planks, where they overlap or are dove-tailed together, are fastened by iron nails driven in perpendicularly, the necessary holes being bored from the outer to the inner surfaces in such a way that the same nail holds together two, or occasionally more, thicknesses of wood. In this manner, with much trouble and more measuring, is obtained the proper curvature of the hull, which, as a whole, is marked by a complete symmetry. The cost of the stout iron nails, and the rapid wear of axe and saw, make the expenses of building these boats so considerable that they amount to five times as much as oak vessels of the same size in Europe. A mast about 20 feet high bears the giant-yard of the single lateen sail, which is generally half as long again as the boat.

Amid the farewell salutations of a large concourse, among which my people counted numerous friends and relations, we pushed off from the shore. Without delay we took our onward course to the mouth of the Blue Nile, doubling the Ras-el-Khartoom, that large promontory, which resembles in form the snout of an animal; it gives its name to the town, and is the partition land between the two arms of the Nile.

Bulky and ponderous as was our boat, the power of the north wind laid its hold upon our giant-sail, and carried us with the speed of steam towards the south. On the forenoon of the following day we found ourselves already 1° below the latitude of Khartoom. We sailed, without staying our course, through the night, which was cheered by the moonlight. I was sleepless with excitement at finding myself at last brought irrevocably to the attainment of my cherished hopes. The universal quiet was only broken by the rush of the bilge-water, and now and then by the cry of the water-birds. Shrouded like mummies in their white garments lay the crew, closely packed upon the narrow deck; and altogether there was something spectral in the stillness of the nocturnal voyage.

As the morning sun fell upon the low monotonous shores of the flowing river, it seemed at times almost as though it were illuminating the ocean, so vast was the extent of water where the current ran for any distance in a straight and unwinding course. Low levels, that seemed interminable, only marked out from the land beyond by narrow belts of trees, formed the framework of the scene. The borders of the desert rise and fall in gentle undulations, on which stand, sometimes scantily and sometimes thickly, groups of Haras and Seyal acacias. The vegetation which is visible demonstrates the complete desert character of Nubia. The shoosh-grass (*Panicum turgidum*), the most general of herbage for the camels, is here trodden down in masses.

The voyage up the White Nile has been very frequently described by various travellers. The districts along the shore mostly retain an unchanging aspect for miles together. Rarely does some distant mountain or isolated hill relieve the eye from the wide monotony. In spite of all, there was no lack of interest. There is much that cannot fail to make the progress ever striking and impressive.

The attention is soon attracted by the astonishing number

of geese and ducks which are seen day after day. The traveller in these parts is so satiated with them, fattened and roasted, that the sight creates something akin to disgust. The number of cattle is prodigious: far as the eye can reach they are scattered alike on either shore, whilst, close at hand, they come down to the river-marshes to get their drink. The stream, as wide again as the Nile of Egypt, is enlivened by the boats belonging to the shepherds, who row hither and thither to conduct their cattle, their dogs in the water swimming patiently behind.

Early on the third day we reached Getina, a considerable village inhabited by Hassanieh, and which is a favourite rendezvous of the Nile-boats. The flats here were bright with the luxuriant green of the sedge; growing abundantly as it does, it serves to impart to the banks the meadow-like character of northern tracts. Thousands of geese (*Chenalopex ægyptiacus*), in no degree disconcerted by the arrival of any stranger, waddled up and down. Although in places the right bank is bounded by sand-banks thirty feet high, the left appears completely and interminably flat, and occasionally admits of the culture of sorghum. This remarkable difference which exists between the aspect of the two banks, and which may be observed for several degrees, is to be explained by a hydrographical law, which is illustrated not only here, but likewise in the district of the Lower Nile. As rivers flow from southerly into more northern latitudes, their fluid particles are set in motion with increased velocity, the result of which is to drive them onwards so as to wash away the eastern bank, leaving a continual deposit on the west.

This phenomenon, which may be just as plainly perceived on several of the great rivers of Europe, is, as might be expected, presented here on a large scale, where the Nile retains its northerly direction along a course which extends over a third part of the earth's quadrant. Hence it has

arisen that the cultivated fields lie more generally upon the western shore, while the eastern gives a deeper fairway, and is found dotted at intervals with settled villages. Hardly ever does the fairway deviate from the eastern shore, and the evident depression of the shore has led several travellers to suspect that they have discovered a proof of the continuous sloping of the land, which, in truth, is only apparent.

It will be understood, therefore, how great a mistake is made in attempting to estimate, as many of my predecessors have done, the degree of productiveness of the country by the sandy levels and starving fields on the right bank. As matter of fact, the White Nile is enriched by an alluvium which would be quite as fruitful as that of the Blue Nile, except that it is wanting in the crumbling clay, which is the product of the volcanic mountains of Abyssinia, and which undoubtedly exercises a most beneficial influence on the results of Egyptian agriculture. Here the soil is not only rich, it is remarkable for its lightness; and, probably from the absence of chalk, it has a warmer, brighter colour than generally marks the Nubian or Egyptian land.

Towards midday the wind had so much increased that our Reis let the boat drift without sail against the stream. The progress we thus made was surprising: then as the gale gradually fell, we ventured to unfurl our sail, till the speed we reached was like that of an arrow over the waters. We drove through the midst of the flocks of geese which came athwart our course, and firing at random caught up as many of the wounded as came within our grasp. Towards the close of the day we reached Wod-Shellay.

Wod-Shellay is one of the favourite resting-places of all voyagers upon the Nile. Here, according to custom, an ox was slaughtered,* and a formal leave was taken of the Mohammedan world, by liberal draughts of merissa beer.

* For five Maria Theresa dollars (1*l.*) I bought two fat bullocks.

This leave-taking had to be repeated more than once. We were told that higher up the stream there were no more villages, but somehow or other opportunities were found, either on pretext of making purchases or of looking at old friends, on which it became necessary to have some more parting cups of merissa beer. Subject to these delays, I lost considerable time frequently in insipid dreariness, where neither scenes nor men could excite my interest.

After making a complete day of rest at Wod-Shellay, I crossed over to the western shore on a brief excursion. I entered some villages at a distance from the Nile and gained some information as to the condition of their agriculture. Wide, though much thinned, forests of the Sunt acacia (*A. nilotica* and *arabica*) cover the districts near the shore; further on there was a wide extent of cultivated flat. The soil is a stiffish ash-grey clay, different from that of Egypt, but not inferior in fertility—an opinion which Sir Samuel Baker, not investigating the west and being acquainted only with the sandy east, has ventured to deny.

A large yellow-grained variety of *Sorghum vulgare*, known in the Khartoom markets as "soffra," thrives here in such perfection that but few ears came under my notice which were not at least nine inches long and more than four in diameter; convincing evidence to me of the fruitful nature of the ground.

I was accompanied by Arslan, a great sheep-dog, which I had brought with me from Europe, and in all the villages through which I passed the inhabitants, as I advanced, scampered off in terror, crying "Hyæna, hyæna!" It was difficult to make them understand that the brown-spotted animal was only a dog. I do not think I know a country where the dread of great dogs is so universal as in the Soudan.

But a few years ago unlimited forests here met the stranger's eye; the large demand for timber for ship-building purposes, however, has all but destroyed them. At

Wod-Shellay, in Mohammed Ali's time, the Government maintained a large dock, on which were built the numerous boats which that enterprising ruler sent out into the upper districts; at present there is a similar establishment higher up the stream upon the Isle of Aba, where the stores of wood are awhile secured to meet the demands of the future. Scarcely one tree out of a hundred yields timber suitable for building: and all along the bank the owners like to pay their taxes by means of wood instead of money; the consequence naturally is that the best trees are prematurely lost and that old trees are comparatively rare. The steamboat service on these waters is much assisted by the inexhaustible supply of fuel which is everywhere to be procured along the banks.

Our voyage was next continued, through the night, as far as a watering-place on the western shore, near which lay the village of Turra. We lay-to in sight of the neighbouring mountain Arrash-kol.

The hippopotamuses now became more frequent; their noise, gurgling, and snorting was heard far over the waters, and grated as harshly on the ear as the incessant creaking of our own rudder. The traveller up the White Nile must accustom himself to this, or he has no hope of an undisturbed night's rest.

The western shores, which are marked by rows of acacias almost as though arranged in avenues, have nothing African in their aspect, chiefly on account of the absence of the palm, that chief ornament of the tropics; they rather remind of what may be seen in the thinly-populated districts beside the Volga and other of the streams of Russia. The Arrash-kol is an isolated mountain some hundred feet high, of which the jagged steeps jut up from the uniform level. It is well known to botanists through the treasures which were gathered there thirty years ago by the traveller Kotschy. Time did not permit me to investigate the country from this interesting centre. I was obliged to content

myself with a trip to the village of Turra, two leagues away.

No idea can be formed of the number of cattle all hereabouts; the route leads over continual watering-places, where herds of cattle, varying in number from 1000 to 3000, are assembled, and form a most striking spectacle. The cattle of the Hassanieh are distinguished by a hump, and are of a race peculiar to the whole of the Soudan, having beyond a doubt some close affinity to the Indian zebu. The ox of the Egyptians, which, in consequence of the cattle-plague in 1863–64, has almost entirely died out, has no hump. Its horns are short, and it differs in the shape of its skull from the ox of the Soudan; the breed has survived only in Central Nubia. In girth and height, not only do the cattle of the Hassanieh exceed the Egyptian, but those which I shall have occasion to mention hereafter as belonging to the Baggara Arabs, surpass the breeds which are kept by the pagan negroes of the Upper Nile. Amongst the Shillooks and Dinka, for instance, the light grey colour predominates, whilst the marking of the skin in the majority of those of which we speak is like a spotted leopard, black specks on a lightish ground; but neither are the white and brown, the piebald, nor coats entirely dun-colour, at all unfrequent.

I was conducted through the fragrant wood of the flowering acacia to a place where a little weekly market had gathered the neatherds of the neighbourhood, and where milk flowed in streams. The Hassanieh do not differ externally from the score of other nomad races which, more or less Arabised, inhabit the steppes and deserts on both sides of the Nile. They appeared to me far more confiding than my old friends the Bishareen and Hadendoa, but perhaps for the reason that, speaking good Arabic, they were able to contribute their part to a good understanding on both sides. They crowded round me everywhere to gaze at my strange big dog, and I was repeatedly obliged to give a history in

detail of his genealogy, his qualities, and all about him. Being in possession of a splendid race of greyhounds, which they train for gazelle hunting, and of which they have a high opinion, their interest was raised to the highest pitch. The dogs smelt strongly; and it is no exaggeration to say, so did the men.

The graceful shade acacias (*A. spirocarpa*) here come once again into the front, soon to be finally lost sight of on the other side of the neighbouring desert. Along the right bank there were many masses of a large-leaved shrub, which covers the country, and for miles disputes the precedence with all the prevailing vegetation; it is the *Ipomæa asarifolia*, appearing in some places like rose bushes in the luxuriant adornment of its ample blossoms, a bright relief to the general dreariness of the shore.

Our voyage is again continued by night; the channel is broad and deep; freely we sail throughout the hours of darkness. The noise of the hippopotamuses is the chief disturbance; it seems as if there is no relief from their tumult. It almost seemed as if they were quite close about us, but one had but to look around, and their clumsy heads were visible in the distance, projecting like black points above the stream. By way of variety there came, at intervals, the roar of some lion prowling on the bank. Such were the novelties of Africa.

In the morning we passed Dueme, one of the largest villages in this district. Soon we reached the groups of little islands whose soil, naturally fertile, has been successfully subject to a recent cultivation. It is a cheering sign of the progress of cultivation in these regions, to see the fellaheen of Nubia travelling continually further and further up the banks of the White Nile. The passive population of blacks on the river, at least in the space of a few decades, has been partly displaced, and partly spurred on to greater energy; and doubtless, therefore, there are many places in

Nubia itself capable of being cultivated, which have become desolate only as a consequence of the oppressiveness of a heavy taxation.

The flocks of geese were still unending, and every expedient was resorted to to make a variety in the way of cooking them; they were stuffed with rice; they were dressed with tomato sauce; they were served with mushrooms; and when every imaginable way of preparing them was exhausted, we had recourse, by way of variety, to the ducks (*Anas viduata*) which were obtainable. Then was the golden age of my *cuisine*. Our provisions were ample, and the inventive faculties of my cook Riharn turned them all to the best account. But different times were yet to come, times when Riharn must murmur that the three years of his life spent in Shepherd's Hotel in Cairo had all been sacrificed, and must repine that he could find no scope for his abilities in Central Africa. The result of all this was, that he was a terrible backslider in his art, and at the end of three years could never cook a dish of rice without burning it.

A few days after our departure I had made the unpleasant discovery that the prudent Ghattas, to whom the vessel belonged, with an eye to economy, had put on board, without due protection, all his powder and a year's supply of the cartridges necessary for the expedition. In order to save the expense of proper chests he had wrapped up several hundredweight of these combustibles loosely in sacks of matting and paper parcels only, and piled them up just under the entrance to my cabin, where I was accustomed to sit smoking my pipe and surveying the land. I had now thrown a cowhide across this explosive heap, and so secured that the smoking and the contemplation might be resumed with greater composure on my part.

On the same day we reached the Egyptian military station Kowa, or El-Ais, at which there is a large Government corn-store. El-Ais was for years the extreme southern boundary

of the State. Passing through it is a much frequented road, which crosses the White as well as the Blue Nile, and unites Kordofan with Abyssinia. Along this road the Baggara fetch most of their horses, which they buy by auction in the market of Gallabat.

Directly above Kowa begins the region of the Shillook Islands, which, as yet unthinned by the axe, are very valuable. A little further up the stream, following the outline of the banks, stretches a series of Nubian agricultural settlement. At one of these goodly islands, known as Om-mandeb, we stayed our course awhile. Mandeb is the name here given to the prickliest of prickly plants, the *Mimosa asperata*; transplanted by the stream, it is occasionally found even as far off as Egypt, but here it surrounds the island shore, and forms a hedge of impenetrable thorns. Here in a wild state is the water melon, and I have submitted proofs that the cradle of this nursling of culture lies in Africa, the original home of the domestic cat and of the ass.

A rich variety of animal life is developed in this wilderness; not only did the shore swarm with hippopotamuses, whose vestiges were like deep pit-holes, but the ground was scooped out in places vacated by rows of crocodiles, which now basked only thirty paces in our front. Great iguanas (*Varanus*) and snakes rustled in the dry grass. Everywhere under the trees were snake skins and egg shells; above in the branches was heard the commotion of the mischievous monkeys (*Cercopithecus griseoviridus*), whilst birds of many a species, eagles from giant nests, and hosts of fluttering water-fowl, gave incessant animation to the scenery of the shore.

What, however, most interested me, was the unlimited variety in the kinds of water plants which abounded on the floods, the sport of the winds and waves. Among them the Herminiera, known under the native name of ambatch, has already been the subject of general remark; it plays so

prominent a part in the upper waters of the Nile, that it might fairly be designated the most remarkable of the native plants.

My predecessor, Kotschy, who did not know that it had already been observed by Adanson in Senegambia, named it *Ædemone mirabilis*, which was corrupted into the still more wonderful name of *Anemone mirabilis*, and so appeared in many books which treated of Africa. The ambatch is distinguished for the unexampled lightness of its wood, if the fungus-like substance of the stem deserves such a name at all. It shoots up to 15 or 20 feet in height, and at its base generally attains a thickness of about 6 inches. The weight of this fungus-wood is so insignificant that it really suggests comparison to a feather. Only by taking it into his hands could any one believe that it were possible for one man to lift on to his shoulders a raft made large enough to carry eight people on the water. The plant shoots up with great rapidity by the quiet places of the shore, and since it roots merely in the water, whole bushes are easily broken off by the force of the wind or stream, and settle themselves afresh in other places. This is the true origin of the grass-barriers so frequently mentioned as blocking up the waters of the Upper Nile, and in many seasons making navigation utterly impracticable. Other plants have a share in the formation of these floating islands, which daily emerge like the Delos of tradition; among them, in particular, the vossia grass, and the famous papyrus of antiquity, which at present is nowhere to be found either in Nubia or in Egypt.

On the 13th of January, on one of the thronging islands, we had our first *rencontre* with the Shillooks. This tribe of negroes formerly extended themselves much further north than at present, having settlements on all the islands; but now they only exceptionally penetrate to this latitude (12° 30′) in their canoes of hollow tamarind stems. The Baggara, meanwhile, are ever gaining a firmer footing on

the river banks, and have already with their flocks ventured far to the east of the stream into the land of the Dinka.

Some long islands of sand distinguished by stripes here gave a noticeable feature to the scene; they were covered with flocks of Balearic or peacock cranes, which had arranged themselves in five or six rows like a regiment of soldiers, their beaks turned to the wind and facing the north. When young this bird, thus plentifully supplied, has flesh more palatable than the goose, because it feeds on corn and beans; and, like the guinea fowl, it made a change in our bill of fare. On the western banks were large herds of antelopes (*A. megaloceras*), which we could see peacefully coming down to drink. In other places we passed close by trees with a lively population of monkeys swinging on the branches; and now for the first time we observed the troops of maraboo storks, which made their appearance in considerable numbers by the water's edge. All this diversity of life gave the fascination of romance to the loneliness of the forest.

The 14th of January was the first day of ill-luck, which I was myself the means of bringing about. Early in the morning another boat had joined us; and the people wished me to allow them to stay awhile that they might enjoy themselves together. Being, however, at a spot which seemed to me extremely dull, I urged them to go further, in order to land on a little island that appeared more full of interest. The excursion which I took was attended by a misfortune which befell one of the two men whom I took to accompany me. Mohammed Amin, such was his name, running at my side, had chanced to come upon a wild buffalo, that I had not the least intention of injuring, but which the man, unhappily, approached too near in the high grass. The buffalo, it would seem, was taking his midday nap, and disturbed from his siesta, rose in the utmost fury. To spring up and whirl the destroyer of his peace in the air was but the work

of an instant. There lay my faithful companion, bleeding all over, and in front of him, tail erect, stood the buffalo roaring, and in a threatening attitude ready to trample down his victim. As fate would have it, however, the attention of the infuriated brute was attracted by the other two men, who stood by looking on speechless with astonishment. I had no gun; Mohammed had been carrying my breech-loader in his hand, and there it was swinging on the left horn of the buffalo. The other man with me, who carried my rifle, had immediately taken aim, but the trigger snapped in vain, and time after time the gun missed fire. No time now for any consultation; it was a question of a moment. The man grasped at a small iron hatchet and hurled it straight at the buffalo's head from a distance of about twenty paces; the aim was good, and thus was the prey rescued from the enemy. With a wild bound the buffalo threw itself sidelong into the reeds, tore along through the rustling stalks with its ponderous weight, bellowing and shaking all the ground. Roaring and growling, bounding violently from side to side, he could be seen in wild career, and as we presumed that the whole herd might be in his train, we seized the guns, and made our quickest way to a neighbouring tree. All, however, soon was quiet, and our next thought was directed to the unfortunate sufferer. Mohammed's head lay as though nailed to the ground, his ears pierced by sharp reed-stalks, but a moment's inspection convinced us that the injuries were not fatal. The buffalo's horn had struck his mouth, and, besides the loss of four teeth in the upper jaw and some minor fractures, he had sustained no further harm. I left my other companion on the spot to wash Mohammed, and hastened alone to the distant boat to have him fetched. In three weeks he had recovered, and as an equivalent for each of his four teeth he had a backsheesh of ten dollars. This liberality on my part wonderfully animated the desire for enterprise amongst my companions,

and put them in great good humour towards me for the future.

After a long time a mountain once again appeared; it was the two peaks of the Nyemati, imposing masses of granite which rise aloft on the right. We took up our quarters on the opposite island, where a number of Baggara Arabs had pitched their tented camp. "Habbabkum, habbabkum, habbabkum, aschera" (good friends), again and again our people begin to shout as soon as they see their swarthy brethren in the faith upon the shore. Then from our side are heard demands for "semmem" and for "roab" (butter and buttermilk), whilst the Arabs cry for "esh, esh," that is, for corn. "Corn," we reply, "we have hardly enough for ourselves." And then once more ensues the mingling of the sounds "semmem" and "habbabkum." At last, on shore, we are embracing the "habbabkums" with wonderful emotion; but this does not quite go down; we find everything they offer us has to be paid for handsomely at Khartoom market-prices. As soon as it was seen that nothing was to be got out of them without payment, our crew was not long in conferring upon them the name of "Nas-batalin" (rascals).

The women were much more courteous, and vied in amiability, so as to entice as many visitors as possible to their merissa-shops. These they had improvised in their huts, eager to make a profit from the ever-thirsty Khartoomers as they sail along. With these women, who were ever actively employed at the hearth, though little accustomed to keep alive the sacred fire of Vesta, my party spent their holiday in rioting and revelry. I, for my part, lingered out my time on the neighbouring steppe, treating the children to biscuits, as I should to bonbons.

The Baggara Arabs possess the wide district which extends from Kordofan and Darfur on the south, as far as the river banks inhabited by the Dinka and Shillooks. Part of them

—indeed, in the east, a third of them—pay tribute to Egypt. The name Baggara means "neatherds," and indeed their wealth consists simply of cattle; they are not, however, shepherds, as they are represented in the idylls of home, but mounted and warlike from their youth; they are bolder robbers than any other of the Ethiopian nomad races. They bring down elephants with lance and sword, a feat scarcely less free from risk than playing with lions and leopards as though they were kittens. Many of them hire themselves out to the Khartoomers to accompany their expeditions to the interior. Several came to offer their services to me, under the impression that my object was the capture of slaves. I confess that I could hardly restrain my admiration when I gazed upon their athlete, agile forms, although I had no call for their services.

The Baggara speak a tolerably pure Soudan-Arabic; they seem to extend themselves rapidly as an immigrant tribe over the pasture steppes, at the expense of other and less favoured races. Their countenances betray little of the Semitic expression, and I saw not a few whose physiognomy reminded me of some of my old friends at home. I can confidently maintain that they form the finest race of the nomad people dwelling on the Nile. I could not help being surprised at the love of ornament and finery which was manifested by this race, advanced as it is. The clothing of the generality consists of indigo-blue shirts, such as are worn by the peasants of Egypt, whilst the more wealthy array themselves in robes of scarlet and figured calico.

On the other shore I visited the mountain, which is almost contiguous to the river. Growing here I first found the tamarind, which never failed me more throughout my entire wanderings. The thick shade of these bright green trees makes them a favourite rendezvous on all the roads of Central Africa. Every traveller in the Soudan can scarce be otherwise than quite familiar with the Hegelig (*Balanites*),

of which, like plums, the fruit falls off and thickly strews the ground below. By the people of Khartoom it is called Lalôb. It contains a sweetish pulp, tasting at first like gingerbread, but it leaves a bitter taste behind, and is purgative in its properties.

Climbing about 800 feet I reached the summit of the Nyemati, and had a fine view of the steppes intersected by the stream. The slopes consist partly of rough, massy blocks of granite, and partly of huge unbroken flats, some a hundred feet in length, which descend to the river and in places appear like sunken roofs. In the rifts and deeper clefts swarm multitudes of bats, and a fetid atmosphere exhales from these murky chasms. The Abyssinian rock-rabbit, creeping like a marmot over the stones, is ever to be seen among the mountains of the steppes. The eastern horizon is bounded by the mountains of the Dar-el-Fungi in Upper Sennaar, at a distance of more than thirty miles.

As we progressed further the river islands became more frequent, and the channels more and more narrowed by the surrounding masses of impenetrable grass. The ambatch is here almost excluded by the vossia grass, but only to reappear at the mouth of the waters. We came continually upon Baggara, with whom, without stopping on our course, we talked and discussed the market prices of provisions. A fine fat bullock was bought for only three dollars, a price at which it would pay to found here a company for the extract of meat; the skins are not exported, but are used in the country. The Baggara hold all the left bank, and visit it in winter when the steppes in the interior are dry and scorched. Wherever they settle, as now and then they do, either on the islands or on the right bank, they completely drive out the Shillook negroes. At various times in the day we landed to fraternise with the Baggara. The large flocks of ducks afforded entertaining and successful sport; and as for geese, there were still more than I and my people could

eat. To and fro, ever and again swept through the water a Shillook fishing in his fragile boat; he is not entitled to the "habbabkum," because he is a heathen; he is mocked with "Wod-e-Mek" (son of a king) for a greeting, made to tell where he comes from, and whither he is going, and if he has any fish, it is taken from him: such is the practice on every vessel. But the Shillooks are also subject to Egyptian rule, and there is no reason to doubt that in a short time they will enjoy equal rights with the other subjects of the Viceroy, however insignificant these may appear to be.

To a degree that created some misgiving as to what might be before us, the progress now began to be unalterably tedious. For a weary time all woodlands seemed wholly to have forsaken the shore; nothing was to be perceived but the desolation of a vast savannah. Dark brown widow-ducks (*Anas viduata*) and shovellers were shot, whose oily taste is only disguised by red pepper. At night the time was usually beguiled by stories of adventures in the Upper Nile district. Everyone has something wonderful which he delights to tell, something beyond all experience, and is ready to swear by the Koran and by the beard of the Prophet that what he says is true. "Africa," said Aristotle ages ago, "has always something new to show;" the latest tale was now about the pygmies, of whom I here received my earliest information. I had no idea that I should be brought into actual and close connection with such people. I laughed at the accounts which eye-witnesses gave of them, and, for my part, quietly put them into the category of men with tails. I took my share in dressing up a story for the entertainment of my party. Alexandre Dumas's tale, 'l'Homme à queue,' served my purpose admirably. It is so clever, and yet so pointed in its fine simplicity, that it thoroughly enlisted the attention of all who heard it.

Notwithstanding the undeniable sameness which prevailed in its outward character, I found every fresh landing-place

afford me some surprise or other. Rich was the reward of penetrating, as I did, a thorough wilderness on the right bank on the mainland. Buffaloes forcing their way along had beaten many avenues through thickets and creepers, and along these I went, followed by a group of armed men. The vestiges in every direction were so conclusive as to the number of the beasts that were about, that we might well expect a *rencontre* as dangerous as that which has already been related. Here in a wild state is found the Luffa, a plant of the gourd family. The dried fruit of this contains a fibrous skeleton, that answers the purpose of a bathing-sponge, and it is frequently cultivated in Egypt for that purpose. I could enumerate a whole series of plants, known in Egypt only under cultivation, which find their original and proper home in the primeval forests of the White Nile. Not unreasonably may an inference be drawn that, in ages indefinitely long ago, the entire Nile Valley exhibited a vegetation harmonising in its character throughout, much more than now. It was the upgrowth of civilisation in ancient Egpyt which displaced the flora from its northern seat, and made it, as at present, only to be found hundreds of miles higher up the land. This assumption is in a measure confirmed by the traditions which survive with regard to animals. In remote times, the ibis, the hippopotamus, the crocodile, all existed in far more northerly latitudes than now. The papyrus, it may be added, gives its witness to the same theory.

After a while the southern horizon was again broken by the elevation of a mountain, which proved to be the Defafang, an extinct volcano, 1000 feet high, several miles from the river. Werne, one of the first explorers of the Upper Nile waters, the only European who visited this locality, collected a variety of specimens of the rocks, and they exhibited the volcanic nature of the basaltic lava, corresponding to similar formations in the Eifel. This mountain

stands as the boundary-mark between the first negro territory on the White Nile and the shepherd race of the Baggara.

As we were sailing in deep water close to the reedy shore, the roar and rustle of our great sail started up a herd of wild buffaloes, which disappeared from sight, before we had time to seize our rifles. When presently we were passing the last camp of the Baggara, our attention was attracted to a scene of excitement, at once vivid and picturesque. The entire population, alarmed by an attack of wild buffaloes on some cattle-drivers, was up and in hot pursuit. Hundreds of men armed with lance or sword, some of them mounted, were furiously hurrying to the scene, urged on by the frantic shrieks of the excited women. We could not resist the conclusion that the buffaloes, which we had disturbed, had proceeded to attack the neighbouring drivers. An impression seemed to prevail that we had fired at the Baggara, but in the tumult nobody exactly understood the circumstances. The gale was in our favour, and we glided rapidly out of reach without learning the precise issue of the disorder. We observed one poor fellow who had incurred a disaster similar to, and perhaps worse than, that which happened to my own Mohammed Amin. About Mohammed I may here mention that his upper lip had been held together by a couple of insect-needles; that he had been treated to plenty of pap and camomile-tea, and that after spitting out one little splinter of bone after another, he soon found himself getting all right again.

In the course of the afternoon the boat sailed for a wager with a flotilla of light-grey pelicans. Repeated small shot could not make them rise; but at last we outstripped them, and succeeded in shooting down several from the group. From the supple breast-feathers of this bird, the savages of the Upper Nile prepare close perukes, which make an excellent imitation of a luxuriant crop of grey hair, and would be a valuable acquisition to any theatrical wardrobe.

A hurried trip upon the left bank brought me upon the track of a large herd of elephants. According to the Baggara, this district is most prolific as a hunting-ground for these animals. The adjacent territories of the Shillooks, on the other hand, are too densely populated to allow elephants to be numerous, and they have to be sought at some distance, where on account of the wide water-level, they are often reached in boats.

At sunset we reached a place on the right bank, which will always retain a certain notoriety in the history of the White Nile, as having once been the headquarters of the renowned robber chief, Mohammed Kher. The raised works, having on their interior traces of decayed walls of earth, and surrounded by deep trenches, mark the site of Mohammed Kher's seriba. To judge by the heaps of bones which still exist, the number of cattle slaughtered and feasted on must have been something enormous. Booty was plundered from far and near, but the Shillooks were the greatest sufferers. Mohammed Kher, with his contingent of well-mounted Baggara, was not only for many years a terror to the neighbouring negro races, but could defy the authority of the Governor at Khartoom. Yet principally it was he who taught the people of Khartoom how, by means of earthworks and regular ramparts, to intimidate the natives and bring them into subjection. Many human bones, the relics of slaves carried off by sickness, as well as the skulls of asses and horses, are found everywhere about. As a consequence of the burning of the steppes, they are frequently noticed in a half-charred condition. Throughout Africa burnt human bones are ever the marks which the slave trade leaves behind. Not far from this ill-famed place we lay-to alongside the village of Kaka, the most northerly place inhabited by Shillooks on the White Nile, and at which the Egyptian Government maintained a depôt for corn. Twenty years ago hundreds of Dinka villages stood on this side of the river.

From the descriptions of travellers who accompanied the expeditions sent out by Mehemet Ali to discover the sources of the Nile, it has been ascertained that the number of the population here was formerly as important as it now is in the very heart of the Shillook country. As a result of the incessant ravages of Mohammed Kher, the entire eastern shore has degenerated into a forest waste. The river still parts the separate districts of the hostile tribes; but the Shillooks have attempted to settle nowhere except at Kaka in the deserted district; the Dinka, on their part, having withdrawn some days' journey into the interior.

Soon after the arrival of the boat, a great crowd of naked Shillooks, prompted by curiosity, assembled on the shore, my dog still being the chief attraction. The first sight of a throng of savages, suddenly presenting themselves in their native nudity, is one from which no amount of familiarity can remove the strange impression; it takes abiding hold upon the memory, and makes the traveller recall anew the civilisation he has left behind.

One of the Khartoom men disturbed my pensive contemplations by pointing to the Shillooks, and making a remark that they looked like Christians. I punished him with the scornful reply to the effect that of whatever faith the savages were, I could answer for it that they had the good luck to be neither Jews nor Mohammedans.

A large *sombrero* of Mexican cut which protected my head from the rays of the sun, excited the curiosity of the Shillooks. On their own heads they wore a similar covering, except that theirs was made from their own hair. I called their attention to the great likeness between black men and white men, but very great was their astonishment when they saw that my hair could be taken off and put on again, which would be to them very incredible. It might almost be said that they are hardly born without their crests, which sometimes resemble the comb of a guinea-fowl, and at other times seem to be

borrowed and designed from the aureoles which we admire in Greek sacred pictures. Even while they are infants at the breast, the hair is begun to be fastened into shape with gum-arabic and ashes, and in course of time is permanently brought into whatever form they please.

The dreary steppe in the neighbourhood of Kaka contained nothing that was worth the trouble of collecting. The dried-up remains of vegetation had been completely annihilated by fire. Accordingly I was anxious to proceed farther the same day, that I might botanise in some undisturbed spot of the primæval forest; my desire was, however, frustrated by an incident which I do not even now remember without a shudder. At the village the shore, as far as the eye could reach, forms a treeless steppe; but at some little distance the river is again bordered by a dense forest. A place was soon reached, where the stream takes a remarkable bend, and proceeds for eight miles in a north-easterly direction. This place has the singular name of Dyoorab-el-Esh, or the sack of corn. Now, as the north-east wind of course was adverse to any north-east progress, it was necessary that the boat should be towed by the crew. As the rope was being drawn along through the grass on the banks it happened that it disturbed a swarm of bees. In a moment, like a great cloud, they burst upon the men who were dragging; every one of them threw himself headlong into the water and hurried to regain the boat. The swarm followed at their heels, and in a few seconds filled every nook and cranny of the deck. What a scene of confusion ensued may readily be imagined.

Without any foreboding of ill, I was arranging my plants in my cabin, when I heard all around me a scampering which I took at first to be merely the frolics of my people, as that was the order of the day. I called out to inquire the meaning of the noise, but only got excited gestures and reproachful looks in answer. The cry of "Bees! bees!"

soon broke upon my ear, and I proceeded to light a pipe. My attempt was entirely in vain; in an instant bees in thousands are about me, and I am mercilessly stung all over my face and hands. To no purpose do I try to protect my face with a handkerchief, and the more violently I fling my hands about so much the more violent becomes the impetuosity of the irritated insects. The maddening pain is now on my cheek, now in my eye, now in my hair. The dogs from under my bed burst out frantically, overturning everything in their way. Losing well nigh all control over myself, I fling myself in despair into the river; I dive down, but all in vain, for the stings rain down still upon my head. Not heeding the warnings of my people, I creep through the reedy grass to the swampy bank. The grass lacerates my hands, and I try to gain the mainland, hoping to find shelter in the woods. All at once four powerful arms seize me and drag me back with such force that I think I must be choked in the mud. I am compelled to go back on board, and flight is not to be thought of.

In the cooling moisture I had so far recovered my self-possession, that it occurred to me to drag a sheet from my chest, and this at last I found some protection, but I had first gradually to crush the bees which I had enclosed with me within this covering. Meantime by great self-denial and courage on the part of my excellent people, my large dog was brought on board to me and covered with cloths; the other, an animal from Khartoom, was unfortunately lost. Cowering down convulsively, I lingered out thus three full hours, whilst the buzzing continued uninterruptedly, and solitary stings penetrated periodically through the linen. Everyone by degrees became equally passive as myself; at length a perfect silence reigned on board; the bees subsided into quietness. Meanwhile, some courageous men had crept stealthily to the bank, and had succeeded in setting fire to the reeds. The smoke rose to their assistance, and thus they

contrived to scare away the bees from the boat, and, setting it afloat, they drove it to the other bank. Had the thought of the fire occurred at first, our misfortune would have assumed a much milder character; but in the suddenness of the attack everyone lost all presence of mind. Free from further apprehension, we could now examine our injuries. With the help of a looking-glass and a pair of pincers I extracted all the stings from my face and hands, and inconvenience in those places soon passed away. But it was impossible to discover the stings in my hair; many of them had been broken off short in the midst of the fray, and, remaining behind, produced little ulcers which for two days were acutely painful. Poor Arslan was terribly punished, especially about the head; but the stings had clung harmlessly in the long hair on his back. I was really sorry for the loss of my nice little dog, which was never recovered, and in all likelihood had been stung to death. These murderous bees belong to the striped variety of our own honey-bee. A mishap like ours has been seldom experienced in the waters of the White Nile. Consul Petherick, as his servants informed me, had once to undergo a similar misfortune. Our own grievance was not confined to ourselves: every boat of the sixteen which that day were sailing in our track, was pestered by the same infliction. No imagination can adequately depict the confusion which must have spread in boats where were crowded together from 60 to 80 men. I felt ready, in the evening, for an encounter with half a score of buffaloes or a brace of lions rather than have anything more to do with bees; and this was a sentiment in which all the ship's company heartily concurred. I took my quinine and awoke refreshed and cheerful; but several of the ill-used members of our party were suffering from violent fever. My own freedom from fever might perchance in a measure be attributed to my involuntary vapour-bath. I had been sitting muffled up for some hours in my wet clothes through

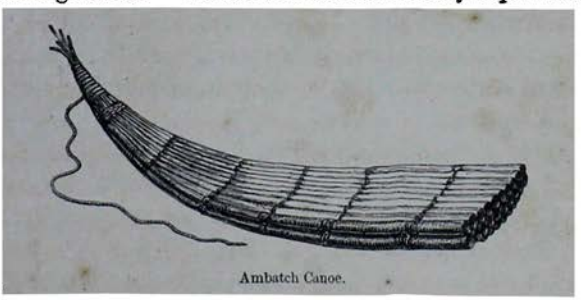
the heat of the day, and no vapour bath more effectual could be contrived. Among the crews of the boats which followed us there were two deaths, which ensued as the result of the injuries which had been sustained.

On the day of the bee-visitation another insect had likewise presented itself, which inflicted some sharpish stings, although they were not attended by any continuous annoyance. It was in itself an insignificant gadfly (*Tabanus*), which here appears to play the part of the tsetse-fly, the natives declaring of it that it injures the cattle. It is widely diffused in the regions through which I travelled, and where the tsetse seems to fail.

Our second day of misadventure came to an end; on the following morning we were again passing along banks void of trees. Towards midday we made a pause on the right bank by a charming grove, where trailing creepers (*Leptadenia*) dropped their pendants perpendicularly down, and bound the spreading boughs of the Shubahi acacias (*A. verugera*) to the ground, an apparatus admirably adapted to the gymnastic frolics of the little apes. Wherever anyone ventures to penetrate into the thickets he will not fail to find countless traces of animal life; snake-skins and feathers of many a species are scattered over the ground; tortoise-shells and fish-bones, the remains of the eagle's feast; bones of animals; occasionally even human skeletons, perfectly entire. On the shore are the shell-fish left by the high water, especially the homes of the Ampularia (*A. Wernei*) as large as one's fist, in its way a giant amongst the mollusks of the mighty river.

Warned by our experience we were ever on the alert against bees, keeping in readiness a bundle of straw and some faggots, in order to be able to kindle the dry grass immediately we had accomplished our excursion on the land. Towards midday we perceived with horror more bees in the shore-grass, and lost no time in getting across to the left

bank. Here we came across numbers of Shillooks fishing in their light canoes of ambatch; darting through the water almost as swiftly as the fish themselves. This speed does not, however, prevent them from having a waddling movement, something like a duck, in their light craft. So light are these canoes that one man can carry three of them on his shoulder, although each canoe is capable of holding three men. From a few dozen shoots of ambatch of about three years' growth, a canoe of this kind can be easily produced; at about six feet high the stem goes rapidly off to a point, so that a bundle of them needs only be tied together at the extremities, and there is at once attained a curve that would grace a gondola.* To use these canoes adroitly requires con-



Ambatch Canoe.

siderable practice, as the least shifting of the centre of gravity is made at the risk of a capsize. Nevertheless, they afforded me good service by taking me to the bank with dry feet, and by enabling me to make botanical collections from the floating bushes. When the Shillook has come to the end of his voyage, he seizes his gondola like an ancient warrior might his shield. He carries it, partly to ensure its safety and partly to allow it to dry, because the ambatch wood easily imbibes moisture and becomes saturated.

During our wanderings the crew had made a valuable

* The accompanying illustration represents a similar canoe, weighing about 40 lbs.

discovery to replace the cracked middle of our long sailyard. It consisted of a tolerably straight, though much knotted, stem of Balanites; it was only 10 feet long, but was doubtless found with much trouble, so rare are any trees that are straight. The portion of the sailyard which had become useless now fell under the axe; it was full of cracks, and could no longer be held together by cow hide; the old bit of northern pinewood, which had done service for years on no one knows how many vessels or in how many latitudes, had now reached the limit of its destiny here on the White Nile, and was to be committed to the flames. Peace to its ashes!

The width of the cultivated country appears to be about ten miles, the whole of the left shore being dotted with numerous small villages. We were not far from Fashoda, the seat of the provincial government, and for the first time availed ourselves of our store of glass beads to open a lively trade with the Shillooks. But the beads had already so much deteriorated in value that we were obliged to buy eggs, fowls, and milk, quite at Khartoom market prices. The poor savages insisted upon this as only right and fair; it was in consequence of their transition from the monkey age of man—the termination, as it were, to them of the stone and bronze period—directly into the advanced condition of citizens and payers of taxes.

Towards midday on the 24th of January we reached Fashoda, and thus, after a prosperous progress, arrived at the limit of the Egyptian empire. Fashoda is the seat of a Mudir, provided with a garrison for the maintenance of Egyptian power. The complete subjection of the entire Shillook country did not, however, follow until two years later. The governor for a considerable time resided six leagues from the town, where he was quartered with 500 soldiers, in order to bring to reason the southern Shillooks, who were by no means inclined to submit. During this

time the armed force in Fashoda did not consist of more than 200 men.

The erection of anything like a town had only been begun within the last two years. The place was formerly called Denab, and now consisted of merely a large mass of conical huts of straw, besides the remarkable structure which constituted the fort. The long boundary walls of the fort, with their hundreds of waterspouts, looked at a distance as though they were mounted with so many cannon, and presented a formidable appearance. In reality the number of cannon which the fort could boast was only four, the rest of the field ordnance being in the camp of the Mudir. His deputy received me very courteously. As a present he sent me at once two fat wethers, and placed at my disposal his boats, mules, horses, soldiers—in short, everything that could assist me to inspect the neighbourhood in comfort.

On account of the shallowness of the water on the side on which the town is built, the boat was moored close by a narrow island which was connected with the mainland by a kind of jetty composed of faggots. This at the time of high water serves as a mole for any boats that may arrive, which are then able to lie close alongside the doors. Before the walls of the town, on a terrace left dry by the sunken flood, extend fields and vegetable gardens, which the Governor, following the Egyptian fashion, has caused to be planted.* This is the southern limit of the wheat culture in the Eastern Soudan.

The neighbouring country consists of steppes, over which, as far as the eye can see, larger and smaller groups of Shillook huts rise from the grass. The demand of wood for the use of the troops has caused the larger trees everywhere to be miserably mutilated, and the few boats which are at the

* The illustration represents the different well-like Shadoofs used for irrigation.

disposal of the Government have enough to do in procuring fuel for the heating of the steamer stationed there. Every branch as it grows is immediately cut off, and the naked stems of the acacias, once so magnificent on account of their massive proportions, are alone able to defy the meagre tools Fashoda can supply.

For three years, it is said, there has been an undisturbed peace here, that is to say, in the environs of Fashoda; up to that time, outbreaks more or less violent, on the part of

View of Fashoda.

the negro settlers, had been the order of the day. Near a withered Adansonia, less than a mile from the walls, the spot was pointed out to me where the cannon of the fortress was for the last time called into action. A well-directed shot had mown down fifteen men at once from a single party who were taking advantage of the rainy season and the high grass to make an attack. The fatal shot was decisive, and the attack was abandoned. From among the bones of the Shillooks killed on that day I selected from a neighbouring

pit nine skulls in good preservation, the investigation of which has furnished some material evidence towards the ethnography of Africa.

All boats are compelled to stop for several days at Fashoda, partly to complete their corn-stores, and partly on account of the poll-tax, to submit to an inspection of the papers, which contain the lists of the crew and soldiers. Hence it happens that throughout January and February Fashoda life is pretty brisk. Egyptian galley-slaves, wearing no fetters—escape being as difficult as in Siberia—loitered on the shore begging, and pestered me with scraps of French and Italian. This I found by no means agreeable. After the cramped dimensions of my cabin, I longed for wider freedom to my limbs; accordingly I had a tent pitched upon the bank, but from fear of thieves it was obliged to be continually guarded by men with loaded guns. Many boats came and went, wending their way to the Upper Nile waters; all reported that more or less they had been sufferers from the bees in Dyoorab-el-Esh. I was told that the whole crew of one boat was obliged to remain in the water from noon till evening, now and then raising their heads to get air, but always under the penalty of getting some dozen fresh stings.

The weather during these days was very cool, for a strong north-east wind blew incessantly with such violence, that at daybreak we had usually a temperature of only 62° Fahr. Even the hippopotamuses seemed to find it over cool in the water, for at sunrise they appeared *en masse* on a neighbouring sandbank: amongst them I found a suitable target on which to try the effect of the full-sized ball which my large elephant gun carried.

I was continually bewildered by the jokes and buffoonery of the crews, for whom jesting seemed a necessity of life. Nothing was done without bad puns. There was an undying *esprit amusant*, whose flow was unchecked alike by day and night. Whenever any one did a thing which could be made

ridiculous, he was received with a volley of cheers of "Hue! hue!" (there he is). The merissa beer of Fashoda, served out in gourd-shells—pints and pots being here unknown—naturally is not without its influence in promoting this perpetual folly. The love of jocoseness among these people is not confined to the young, but makes them, even when advanced in years, as merry and as naïve as children.

Some Arab names are as generally common as our own Brown and Smith; on our boat alone we had six Mohammeds; for distinction, therefore, each of these had to be assigned his special nickname. One was called Abu-Asherah (the man with ten fathers); another Berdawily (the chilly one). The others were designated by epithets more or less poetical, as father of the virgin, or sheikh of the women. My Mohammed, who had the *rencontre* with the buffalo, was sufficiently distinguished by his appellation of Amin, the faithful, but he was also jocosely known as "the swimmer." He had once been the means of losing a boat which a merchant had entrusted to his care, and had only escaped by swimming to shore, a feat which acquired for him the satire associated with his name.

An occurrence, which I can hardly say surprised me, but which I had expected hourly from amongst the Arab idlers, alarmed us on the first evening of our arrival. The gun of one of our soldiers went off accidentally, and the ball whistled across our boat. On the following morning, through similar carelessness, a slave of one of the Government officials received a shot through his arm, for which the offender had to pay 150 dollars, a sum which had to be raised from the entire crew, because, as they said, they were all liable to the same accident. I had myself only narrowly escaped being hit by the first mishap, and the captain (although generally he was most considerate towards his crew), acting as Ghattas' agent, fell with great severity upon the offender. By the judgment of the majority, to which

the Nubians ever appeal, the fellow was assigned some dozen lashes of the kurbatch, which he was thrown down on the deck to receive, and which he bore without a murmur.

The right side of the main stream at Fashoda is not the mainland, but is a long island, which extends for several leagues above and below. Beyond the true eastern shore the Dinka are said to be settled in extensive villages, and at that time still furnished an inexhaustible supply of slaves to the marauding expeditions of the garrison of Fashoda. In 1870, Baker succeeded in putting an end to this disorder, the knowledge of which penetrated to the most remote tribes. The Dinka tribes of that region are called Dang-Yoht, Dang-Yahl, Behr, Nyell, and Abelang.

The shore opposite Fashoda contains wide bush-forests and unlimited supplies of wood. During one of my excursions thither I killed an enormous African boa, the Python Sebæ. It was about fifteen feet in length, not above the average size to which the species attains; in Gallabat I have frequently seen them over twenty feet. The speedy death of this huge reptile by a charge of heavy shot, of which only four grains hit, struck me as very remarkable. The skin was brilliantly spotted, and yielded admirable material for making a waterproof gun-case.

CHAPTER III.

Camp of the Mudir. A negro king. Campaigns. Future of the country. A wise judge. The shrieking priest. Gum-arabic. The melodious tree. Mohammed Aboo-Sammat. Boats on the flight. Treachery of the Shillooks. General market. Excuse for plunder. First papyrus. Cæsar among the pirates. Useless attempts to proceed. A world of grass. Hippopotamuses in a fright. The last obstacle. Depreciation of the Gazelle stream. *Bon-mot* of the Viceroy. Ghattas' namesake. The slipper-shape. Description of the Nueir. Analogy between man and beast. Cactus-type of Euphorbiæ. The Bahr-el-Arab a mainstream. Vallisneria meadows. Arrival in Port Rek. True nature of the Gazelle. Discovery of the Meshera. Deadly climate and its victims. Le Saint. Features of the scenery. The old queen and her prince consort. Royal gifts. Fishes and birds.

I REMAINED nine days in Fashoda, a residence to which the non-arrival of the boats bound for the Gazelle River compelled us, because our force was not sufficiently numerous to overcome by ourselves the obstacles which the "Sett," or grass-barrier, would present, and also inadequate for protection against an attack, which was not improbable, from the hitherto unsubdued residents.

A wider ramble, in which I inspected several Shillook villages, led me farther into the country, and gave me some conception of its thronging population. The Turkish officer, who welcomed me like a countryman because I was European, attended me, followed by a number of soldiers, all of us being mounted. Although throughout this tour, I was not offered even a bowl of fresh milk, and saw little beyond what had already come under my observation, viz., grey and rusty-red beings, innumerable conical huts, and countless herds of cattle; yet I could not be otherwise than im-

pressed by various details which appeared characteristic of this people, now incorporated as Egyptian subjects, and which I shall proceed to relate.

The Shillook tribe inhabits the entire left bank of the White Nile, occupying a territory about 200 miles long and about ten miles wide, and which extends right to the mouth of the Gazelle River. Hemmed in by the Baggara on the west, it is prevented by the river from extending itself farther eastward, and only the lower course of the Sobat has any of the Shillooks for its denizens. Their subjection to Egyptian government, which was completed in 1871, has caused a census to be taken of all the villages on the left bank of the Nile, which resulted in an estimate of about 3000. Taking the character of the villages into account this would give a total of above a million souls for this portion of the Shillooks alone. Now the Shillook land, which lies upon the White Nile, has an extent of hardly less than 2000 square miles, and when the number of heads upon this is compared with those in the populous districts of Europe we are justified in reckoning from 600 to 625 to a square mile; a result altogether similar is arrived at from a reckoning based on the estimate of there being 3000 villages, each village having huts varying in number from 45 to 200, and each hut averaging 4 or 5 occupants; this would give a total of about 1,200,000. This, in fact, is an estimate corresponding entirely with what the Mudir of Fashoda, who was conversant with the details of all state affairs, had already communicated to me in 1869.

No known part of Africa, scarcely even the narrow valley of the Nile in Egypt, has a density of population so great; but a similar condition of circumstances, so favourable to the support of a teeming population, is perhaps without a parallel in the world. Everything which contributes to the exuberance of life here finds a concentrated field—agriculture, pasturage, fishing, and the chase. Agriculture is

rendered easy by the natural fertility of the soil, by the recurrence of the rainy seasons, by irrigation effected by the rising of the river, assisted by numerous canals, and by an atmosphere ordinarily so overclouded as to moderate the radiance of the sun, and to retain throughout the year perpetual moisture. Of fishing there is plenty. There are crocodiles and hippopotamuses in abundance. Across the river there is a free and open chase over wildernesses which would advantageously be built upon, but for the hostility of the neighbouring Dinka. The pasture lands are on the same side of the river as the dwellings; they are just beyond the limits of the cultivated plots; occasionally they are subject to winter drought, and at times liable to incursions from the Baggara; but altogether they are invaluable as supplying daily resorts for the cattle.

Still further proof of the superabundance of population of the Shillooks is manifest from the emigration which goes forward in a south-westerly direction, where considerable numbers of them, the Dembo and Dyoor, have settled on the border-lands between the Bongo and Dinka. Of these, however, I will speak hereafter; I will only pause now to remark how, in vivid contrast to the monotonous uniformity of nature which ordinarily asserts itself throughout vast tracts of Central Africa, there are even exhibited diversities of human development, differences of dialect, and peculiarities of bodily conformation. In the Shillook territory there are probably no less than 600 residents to the square mile, whilst in Bongo-land, within 180 miles to the south-west, there would be found hardly a dozen occupants on an equal area. Again, between lat. 5° and 1° N., within a range of not more than 300 miles, are to be found examples of the largest and of the smallest races of mankind—the Bari and the Akkah, of which the former might rival the Patagonians in stature, the latter being scarcely taller than Esquimaux, and considerably below a medium height.

It should be appended to what has been said about the villages, that the entire west bank of the Nile, as far as the confines of the district reach, assumes the appearance of one single village, of which the sections are separated by intervals varying from 300 to 1000 paces. These clusters of huts are built with surprising regularity, and are so closely crowded together that they cannot fail to suggest the comparison with a thick mass of fungus or mushrooms. Every village has its overseer, whilst the overseers of fifty or seventy, or sometimes of 100 villages, are subject to a superintendent, who has the control of what may be called a "district," and of such districts there are well nigh a hundred, each of them distinguished by its particular name. One of the descendants of the ancient kings had been reduced to entire subjection under the Government; another at the period of my first visit was still resisting to the utmost.

In the centre of each village there is a circular space where, evening after evening, the inhabitants congregate, and, either stretched upon hides or squatting down on mats of ambatch, inhale the vapour from burning heaps of cow-dung to keep off the flies, or from pipes with enormous clay bowls smoke the tobacco of the country.

In these spaces there is frequently erected the great stem of a tree, on which according to common African usage kettledrums are hung and used for the purpose of warning the inhabitants of any impending danger, and of communicating intelligence to the neighbourhood. Most of the negro tribes are distinguished by the form of their huts. The huts of the Shillooks are built with higher walls than those of the Dinka, and, as an ordinary rule, are of smaller circumference; the conical roofs do not rise to a peak, but are rather in the shape of flattened domes, and in this way it is that they acquire the singular resemblance to mushrooms of which I have spoken. The villages are not enclosed externally, but are bounded by fences made of straw-mats

running between the closely-crammed houses, and which serve for shelter to the cattle of individual householders. Great grazing-plots, such as the larger villages combine to provide for the benefit of the community, and exist amongst the Dinka, cannot be secured for the Shillooks, because they are comparatively limited for space.

Now although these savages are altogether unacquainted with the refined cosmetics of Europe, they make use of cosmetics of their own; viz., a coating of ashes for protection against insects. When the ashes are prepared from wood they render the body perfectly grey, and hereby are known the poor; when the ashes are obtained from cow-dung they give a rusty-red tint, the hue of red devils, and hereby can be recognised the landowners. Ashes, dung, and the urine of cows are the indispensable requisites of the toilet. The item last named affects the nose of the stranger rather unpleasantly when he makes use of any of their milk-vessels, as, according to a regular African habit, they are washed with it, probably to compensate for a lack of salt.

The external appearance of the Shillooks, therefore, is by no means agreeable, but rather offensive to the beholder, who will hardly fail to notice amongst all the negro people who dwell in the plains of the Upper Nile a singular want of the lower incisor teeth, which in early life are always broken off. Their physiognomy hardly offers that decided negro type which their swarthy complexion would lead one to expect. To judge by the shape of the skull, this people belongs to the less degraded races of Central Africa, which are distinguished from other negro stocks by a smaller breadth of jaw and by a less decided narrowness of head. A comparison which I made with the skulls which I had collected and some which were taken from ancient Egyptian graves, and with the heads of living fellahs, established the fact of a remarkable resemblance. According to Professor R. Hartmann of Berlin, the similarity between the heads of

ancient Egyptians and the Shillooks rests on the projection of the nasal bones; to have these so deeply set as to appear compressed by the forehead, would seem to be discordant with the general type of negro races. Without pronouncing any decided opinion as to the actual relationship of the Egyptian to the Shillook, that eminent *savant* thinks that he at least discerns a fresh proof of an unquestionable African origin of the latter.

Entirely bare of clothing, the bodies of the men would not of themselves be ungraceful, but through the perpetual plastering over with ashes, they assume a thoroughly diabolical aspect. The movements of their lean bony limbs are so languid, and their repose so perfect, as not rarely to give the Shillooks the resemblance of mummies; and whoever comes as a novice amongst them can hardly resist the impression that in gazing at these ash-grey forms he is looking upon mouldering corpses rather than upon living beings.

The stature of the Shillook is very moderate, and, as a general rule, is short compared with that of the lank and long-legged Dinka.

Like most of the naked and half-naked Africans they devote the greatest attention to the arrangement of their hair; on every other portion of the body all growth of hair is stopped by its being all carefully plucked out at the very first appearance. As has been already observed, amongst the men the repeated application of clay, gum, or dung, so effectually clots the hair together that it retains as it were voluntarily the desired form; at one time like a comb, at another like a helmet, or, it may be, like a fan. Many of the Shillook men present in this respect a great variety. A good many wear transversely across the skull a comb as broad as a man's hand, which, like a nimbus of tin, stretches from ear to ear, and terminates behind in two drooping circular lappets. Occasionally there are heads for which one comb does not suffice, and on these several combs, parallel to

one another at small intervals are arranged in lines. There is a third form, far from uncommon, than which nothing can be more grotesque. It may be compared to the crest of a guinea fowl, of which it is an obvious imitation; just as among ourselves many a way of dressing the hair would seem to be designed by taking some animal form for a model.

Every now and then, however, one meets with heads of which the hair is closely cropped. However it may have happened, whether from illness or from some misadventure in dressing the hair, or perhaps from a fall of which the consequence has been an accident to the ponderous head-gear, I hardly know how, but something always seems wanting to such heads. In such cases there is frequently seen a comical-looking bandage fixed over the brow, forming a shade for the eyes, and which is made of a giraffe's foxy-red mane clipped short. This has been elsewhere observed, and is not unknown amongst the Kaffirs of South Africa. Thus much for the men.

As far as regards the women—I saw none except those whose short-cropped hair appeared stippled over with fresh-sprouting woolly locks, and resembled the skin of a new-born lamb, like the "Astrachan" of commerce. The women do not go entirely naked, but wear an apron of calf-skin, which is bound round their loins, and reaches to their knees.

Just like the Dinka, whose external habits, apart from their hair-combs, they would appear almost entirely to follow, every man amongst them ordinarily carries a club-shaped crutch, nearly three feet in length, with a heavy round knob at its upper end, but which tapers down to a point at the other extremity, so that it resembles a gigantic nail. Their only arms are their long spiked lances, of which (to judge from the equivalents taken in exchange) one is valued at a Maria Theresa dollar. Bows and arrows are just as unknown amongst them as amongst the neighbouring Dinka,

whilst, on the contrary, amongst the Nueir they are the chief weapons.

The domestic animals which the Shillooks breed are oxen, sheep, and goats, the same kinds as hereafter we shall find amongst the Dinka; besides these, they keep poultry and dogs; other animals are scarce, and probably could not endure the climate. Throughout the country dogs abound, in shape like greyhounds, but in size hardly equal to our pointers. They are almost always of a foxy-red colour, with a black muzzle, much elongated; they are short-haired and sleek, and have long tails, smooth as those of rats; their ears are tolerably long, the upper portion being flabby and ragged, and therefore drooping forward. Almost beyond example in their activity in leaping and running, so fleet are they that with the greatest ease they outrun the gazelle, and are everywhere of service in the chase; over the earth-walls ten feet high, and over ant-hills, they bound with the celerity of cats, and can jump three or four times the length of their own slim bodies. I kept a number of genuine Shillook dogs, which subsequently did very well in the farther interior, and increased considerably. Like all dogs of the Nile district, from the Egyptian pariah to the village cur of the Soudan, this breed is always found to be deficient in the dew-claws of the hind foot, which always exist in our European dogs. As a general rule, it may be said that the Shillook dog differs little from the races of the Bedouins of Kordofan and of Sennaar.

The only conception which the Shillook entertain of a higher existence is limited to their reverence for a certain hero, who is called the Father of their race, and who is supposed to have conducted them to the land which they at present occupy. In case of famine, or in order that they may have rain, or that they may reap a good harvest, they call upon him by name. They imagine of the dead that they are lingering amongst the living and still attend them.

It is with them as with other uncultivated children of nature, that old traditions and veneration of ancestors supply the place of religious legends or ethic system.

Late in the evening of the 1st of February we left Fashoda, and proceeded, without using the sail, for the greatest part of the night along the left bank. At daybreak we arrived at the Egyptian camp. We were received with singing, shouting, and the braying of trumpets. I was conducted by the Governor to his tent, and whilst, hour after hour, we smoked our pipes in company, I related to him the most recent events in the political world. After talking to him about the sources of the Nile, and the campaign of the English in Abyssinia, I told him of the events of the "Seven Days' War," in return for which I was presented with a fine bullock and several sheep and goats. The encampment, as I found, consisted of some huts erected with straw in a very off-hand way, the irregular forms of which contrasted very disadvantageously with the symmetrical regularity which is so conspicuous in the dwellings of the Shillooks. Military tents and awnings of sedge completed the equipment of the camp. An ordinary thorn hedge with two loopholes, in which a cannon was always placed, protected the spot, which was close to the left bank of the river. In the Mudir's verandah I also made acquaintance with the Shillook chief, to whom I before alluded, who had entirely surrendered to the Egyptian Government, and was now, as the Governor expressed himself, "coming to his senses." There was no external indication whatever of his rank, except a miserable rag which hung about his loins, or the common sandals which he wore, might be considered such. His short-cropped hair had no covering; his neck had a row of beads, such as the heads of families are accustomed to wear, worth about a couple of groschen; and this was all the decoration he displayed. He retained now but a shadow of his former power; his better days were gone, days in which, attended by a council of

ancestral state, he had swayed the sceptre of patriarchal dignity. Of all the negro races which occupy the entire district of the Nile, the Shillooks used to uphold the most perfectly regulated government, and to appreciate them thoroughly it is necessary to refer back to the earliest registries, which those who accompanied the expedition of Mehemet Ali left on record. But now this condition is all changed, and everything has disappeared which gave this independent and primitive people their most striking characteristics.

In the immediate proximity of the camp all was generally at peace; the Shillooks apparently submitted tamely enough to a Government which did not exercise any very tyrannical power, and which contented itself with demanding a supply of bullocks and a stated levy of provisions to maintain the troops. Notwithstanding this usual semblance of concord, the Governor was notoriously on terms of open enmity and feud with the Shillooks in the south. Kashgar, another descendant of the ancient reigning family, still maintained himself as an uncontrolled sovereign, and was able to render that part of the river extremely unsafe for navigation. Ever and again the Governor with his force, never more than 600 strong, was undertaking expeditions against them; but, as he himself told me, they never came to an actual engagement. Although the blacks, he said, might muster 20,000 or 30,000 strong, the second cannon shot was quite enough to make them scamper off, and leave their flocks and herds in the lurch; upon these the mounted Baggara, in the service of the Government, descended and made them an easy spoil. This nomadic race, from time immemorial, has ever, as I have already mentioned, been addicted to the plunder of cattle, and has always exhibited a preference for that occupation.

In another respect the situation of the Government here is far from easy. Not only are the Shillooks at heart at

enmity to it, but it excites the hostility of the trading companies who ascend the river. Nothing indicates the circumstances better than the expression of a member of one of these companies. "The Mudir," he said, "doesn't like to attack the Shillooks; he takes care of them, and only wants a few of their bullocks; but we—we should just like to annihilate them, devil's brood as they are." In fact, as the Mudir said to me, he only wanted the best of the Shillooks; the Shillooks know well enough that their "best" is their cattle, and this they are not really resigned passively to surrender, and so they go on and continue to be defiant, till they feel the grenades and rockets scorching their skins. For the future fortune of this favoured country I cannot anticipate much that is good. Whilst the Viceroy refuses to appoint Europeans as governors, like Munzinger in Massowa, his officers must fail in those qualifications which would be adequate for the successful administration of a newly-acquired negro territory. The visible retrogression of the Egyptian Soudan with respect to cultivation, confirms this unfavourable foreboding. Ismail Pasha centres all his hope upon the stimulating influence of a railway which shall connect Egypt with Khartoom, and very likely he may witness commerce enlarged to an unsuspected magnitude; one thing, however, there is which he cannot prevent, and that is the depopulation of the Shillook lands. Since they remain closed to European civilisation, and since the husbandmen in Egypt are sufficiently engrossed in acquiring fresh soil for their own tillage at home, there is no prospect whatever for any advantage to these lands, except it can be found in a large immigration of labourers from Asia.

The Governor was a remarkably intelligent Kurd, and great was my regret that I could not spare a longer time to listen to the interesting information that he gave me about the habits of the Shillooks, which he knew accurately from many years' experience. I accepted all that he said with

the greater confidence, because it had seldom occurred to me to meet a Turkish officer, who could fluently speak the dialect of the country. He was continually being called upon to adjust the disputes of the natives, who appealed to his judgment, even in their most private concerns. One young girl there was who, abashed and dejected, had been crouching in a corner, and then ventured to present herself before him as adjudicator. With her speech half-choked by emotion, she besought him to interpose his authority to set aside the obstacles which her parents threw in the way of her completing her marriage engagement with a young Shillook, whose name was Yōd. The hindrance to the wedding was simply the fact that the young man possessed no cattle. The Mudir inquired whether Yōd was not the owner of some cows. Her reply was, "No; Yōd has no cows; but Yōd wants me, and I want Yōd." Although she urged her point over and over again, and pressed the Mudir to pronounce in her favour, because his judgment would constrain her parents, the Mudir did not yield. The girl kept saying "we must," and "we will;" the judge could speak only of bullocks. There seemed to be no settling the matter, when he said, "You must go and wait: wait till Yōd has bullocks enough to satisfy your parents." This was not a very comforting decision, but it showed me plainly how that it was ever his rule to recognise the customs of the country.

In order to attend to my European correspondence, which had fallen somewhat into arrears during my voyage, I prolonged my stay for three days. Fine forests of gum-acacias encompassed the spot as far as the extensive Shillook villages allowed them space, whilst the opposite shore presented an unreclaimed desert. At this season, when the waters had nearly reached their lowest level, the banks of the river were everywhere enlivened by numerous kinds of water-fowl. Ducks and geese did not preponderate, as in the northern districts, but the bird most frequently seen was the crowned

crane. Thousands of these in swarms were to be seen upon the level banks, nor was there much difficulty in getting at them. Protected by the tall grasses on the slopes of the bank, one had but to discharge a load of good-sized shot, and the destruction was marvellous. Besides the black and rose-coloured storks there is occasionally found the common stork, familiar to us at home; deeper onwards in the interior I have always looked for this in vain. In every region throughout Africa there exists the rapacious hawk, whilst the graceful grey falcon is not at all uncommon. The most remarkable bird of prey, however, is the large whitey-brown eagle (*Haliaëtos vocifer*), which, sitting apart on trees and shrubs in the proximity of the waters, startles the passer-by by its peculiar shriek.

The noise of this bird is very singular, and is unlike any other known note of the feathered race; its cry ever comes unexpectedly, and is prolonged on the waters. Sometimes it makes one think that it must be the cry of frightened women which alarms him; or sometimes it appears as if a lot of shouting boys were rushing from their hiding-place. The illusion is so perfect, that, for my part, I never failed to hurry off in the direction of the sound, whenever I chanced to hear it. The peculiar cry of the bird is so characteristic, that the inhabitants of the Soudan have given it the expressive name of Faki, the shrieking priest.

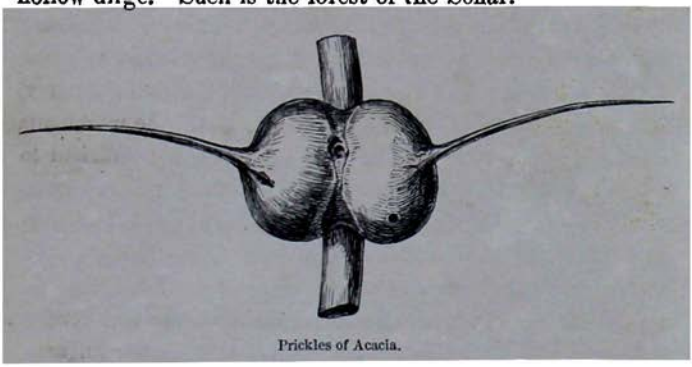
Of birds which attach themselves to inhabited parts, the white-breasted Abyssinian raven is most abundant; the trees around Fashoda are full of them. This species dwells in pairs, which are continually hacking away at the tree stems, the raven not unfrequently coming to associate with them. The Rahama, consecrated (as an emblem of parental affection) amongst the ancient Egyptians and Hebrews, collects in considerable numbers in Khartoom, where it does duty as a scavenger; but although it is ever to be found in the towns of Egypt and Nubia, it is never met with here; it shuns the

wilderness, and only feels at home in civilised places. In this district its place is supplied by the little carrion vulture (*Neophron pileatus*), which the people of the Soudan call "Nisr," although this is only the ordinary Arabian appellation of an eagle. The heaths, broken as they frequently are by low shrubs, notwithstanding the nearness of so many dwellings, afford a suitable resort for whole coveys of guinea-fowls. The herbage on the steppe itself appears for miles together to be covered with the Bamia (*Hibiscus esculentus*), a species of marsh-mallow, the seed-pods of which form a favourite vegetable amongst the Nubians. By the White Nile it grows perfectly wild, whilst in the north it requires to be cultivated.

The acacia-groves produce gum in such unlimited quantities that, in the interests of commerce, they are specially worthy of regard. In the winter time, with the greatest ease in the course of a day a hundredweight of this valuable article could be collected by one man. Not once, however, did I see anyone gathering the gum, although the merchants of Khartoom are never in a position to supply sufficient to meet the demands of Europe. The descriptions of gum, which are hence brought to the Khartoom market, are those known as Sennaari and Talha, and are, in truth, only of a mediocre quality. Yet they do possess a certain marketable value, and through their abundance could be made to render a very large profit. The acacia-groves extend over an area a hundred miles square, and stretch along the right bank of the stream. The kind which is most conspicuous is the *A. fistula*, and which is as rich as any other variety in gummy secretions. I choose this definition of it from its Arabian appellation "soffar," which signifies a flute or pipe. From the larvæ of insects which have worked a way to the inside, their ivory-white shoots are often distorted in form and swollen out at their base with globular bladders measuring about an inch in diameter. After the mysterious insect has

unaccountably managed to glide out of its circular hole, this thorn-like shoot becomes a sort of musical instrument, upon which the wind as it plays produces the regular sound of a flute; on this account, the natives of the Soudan have named it the whistling-tree. It yields a portion of the gum known on the exchange as gum of Gedaref. It is often found in lumps as large as the fist; it is rarely colourless, and more frequently than otherwise tinged with the hue of amber.

Very striking is the sight afforded by the wood of acacias in the months of winter; the boughs, bare of leaves and white as chalk, stretch out like ghosts; they are covered with the empty pods, which cluster everywhere like flakes of snow; whilst the voices of a thousand flutes give out their hollow dirge. Such is the forest of the Soffar.



Prickles of Acacia.

The peculiarities which affect the growth of the acacia appear to be transmitted to a very remarkable extent. On a former journey I took some seeds to Cairo, which already had produced some trees of a very considerable size. These trees exhibited the special appearances of the parents; below the prickles were the same excrescences and insect-borings; not only was this the case in the park of Esbekieh in Cairo, but it also occurred in several other situations, which left the problem to be solved, how was it that the

insect survived in the seed, or how did it contrive to get to its tree in Cairo?

On the 5th of February we finally left the Egyptian encampment, and directed our course up the stream towards the region of the papyrus. After sailing all night we stopped just short of the mouth of the Sobat, on the right bank close to a forest. The progress of the coming days would lead us through an insecure territory; we wanted to make up our supply of wood, and knew that the hostility of the Shillooks would, in many places, render any attempt at landing on our part quite unadvisable. Of the boats which were bound for the Gazelle, only one had arrived. In order to render us assistance, the Mudir had charged the owner not to leave my party in the lurch. This circumstance had a very important effect upon my whole journey, as it was the means of introducing me to Mohammed Aboo Sammat, who was proprietor of the boat. This magnanimous Nubian was destined to exercise a very considerable influence on my undertaking, and, indeed, he contributed more to my success than all the satraps of the Soudan. During my land journey I had first made his acquaintance, and now he invited me to be his guest until he should have accompanied me to the remotest tribes, a proposal on his part which made my blood tingle in my veins. A native of Dar-Kenoos, in his way he was a little hero. Sword in hand he had vanquished various districts large enough to have formed small states in Europe. A merchant full of enterprise, he avoided no danger, and was sparing neither of trouble nor of sacrifice; in the words of the Horaz, "he explored the distant Indies, and compassed sea and land to escape poverty." Yet all the while he had the keenest sympathy with learning, and could travel through the remotest countries at the bidding of science to see the wonders of the world.

Far as eye can see, the Sobat flows between level banks bounded by unlimited steppes; where it joins the Nile it is

about half as broad as the main stream. For a considerable distance the cloudy milk-white waters, which indicate the mountain stream, can be distinguished as they roll into the deep azure of the White Nile. The Sobat water is, however, far preferable to the Nile water, which, after being strained as it were, through a filter of grass, emerges transparent in colour, but with a flat, earthy flavour, which is highly disagreeable to the palate. The effect of the commingling of the two streams can be distinctly traced as far as Fashoda, where the inhabitants fancy they enjoy some consequent sanitary advantage.

We kept quite close to the right bank of the uninhabited quarter, but on the same day we found ourselves in full flight before thousands of the native Shillooks, who, with their light canoes of ambatch, hastened to the bank, and in thick troops prepared to displace us. As fate would have it, just as we were within sight of the dreaded Shillooks, our sail-yard broke, and we were compelled to seek the land. Soon rose the cry, "They are coming! they are coming!" for in fact we could see them dashing over the stream with incredible celerity, and crowding their canoes as thick as ants. Hardly had we regained our craft, and made some speedy preparations for defence against an attack, when the foremost of the Shillook men, equipped for war, carrying their tufted lances in their hands, showed themselves by the banks which only now we had quitted. Apparently they came to offer some negotiation with us in the way of traffic; but ours was the ancient policy, "Danaos timentes," and we pushed on.

Although, including Aboo Sammat's party, we numbered full eighty armed men, we could not help suspecting that as soon as the north-east breeze should drop, by whose aid we were going along the stream without a sail, the savages would take advantage of our bad situation and inadequate fighting force to make an attack upon us.

This fear was not without reason; there were here, at a

I. IN FULL FLIGHT BEFORE THE SHILLOOK CANOES. p. 100.

guess, at least 10,000 Shillooks on their legs and 3000 ambatch canoes in motion on the river. Accordingly we pushed up the stream, and had an opportunity, from a more secure neighbourhood, to observe the Shillooks more accurately. My telescope aided me in my investigation. I saw crowds of men violently gesticulating and contending; I saw women burdened with baskets loaded with poultry clapping their wings. After a while the Shillooks, disappointed, began to vacate the bank which we had left, and on the river could now be seen a redoubled movement of the canoes, whilst opposite fresh multitudes poured in, and gave to the whole scene the appearance of a general emigration of the people.

Within the last three years the boats had been permitted with reluctance, and only when several were together, to approach the shore at this part of the stream, for here it had happened in one single season that five vessels, the property of Khartoom merchants, as they were coming down the river laden with ivory, were treacherously attacked one after the other. The stratagem was employed of diverting the attention of the crews by an exhibition of attractive merchandise; while the Nubians were off their guard, at a given signal the Shillooks fell upon them and butchered them without exception. Gunpowder, rifles, and valuable ivory, all fell into their hands; the vessels they burnt. Ghattas himself, the merchant who owned the vessel by which I was travelling, suffered the loss of a costly cargo, while eighty men on that occasion met with a violent death. Only the Reis and one female slave escaped to Fashoda. Betimes they threw themselves into the water, and concealing their heads with some water weeds, floated on till the stream carried them out of the reach of harm.

On the following morning, after we had passed the mouth of the Giraffe river, we were joined by a flotilla of six boats As we reckoned now nearly 350 armed men, we felt that we

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could venture without risk to enter upon commercial transactions with the Shillooks. The disturbed condition of the country had interfered to prevent them carrying about their merchandise as usual, and they now were collected in unusual numbers at the mart.

A mile away from the river-bank there were rows of dome-palms bounding a broad level, on which was exhibited all the liveliness of ordinary market-clatter. Busy and bustling, there were thousands congregated together; but the fear this time was not on our side. From far and near streamed in the natives; many brought baskets full of corn, eggs, butter, beans, and ostrich-feathers; others offered poultry, tied together in bunches, for sale: there was altogether the bustle of such a market as only the largest towns could display. The area was hemmed in by a guard of armed men, whose lances, like standing corn, glittered in the sun. The sense of security raised the spirits of the light-hearted sailors, and their merry Nubian songs rose cheerfully in the air. Two hours slipped quickly away, while the necessary purchases were being made, the medium of exchange being white or red glass beads. Soon afterwards a favourable breeze sprung up. Everything was still active in the market; fresh loads came teeming from the villages; the outcry and gesticulations of the market people were as excited as ever, when suddenly there boomed the signal to embark. The confusion, the noise, the hurry which ensued baffle all description; the Shillooks were in a panic, and, imagining that it must be all up with them, scampered off and jostled each other in every direction.

The propitious wind did not, however, prevent our people from finding time to make a little *détour* into the country, where they had the luck to find some herdsmen who were trying to conceal a heifer amongst the grass. There was a report of a gun, and the beast was stretched upon the ground. A few minutes sufficed to quarter its carcase, and the hide

and the pieces were conveyed on board. Half-a-dozen kids and some sheep were added to the stock, and so we proceeded on our way. In the eyes of the people such plundering is deemed to be perfectly legitimate for various reasons: first, because the Shillooks are heathen; secondly, because some years before they had burnt five Nubian vessels; thirdly and chiefly, because mutton and beef are very choice eating, particularly after having been limited for a time to durra-pap. My tawny companions seemed to think that they knew a fourth palliation for their proceeding, which consisted in this, that none but themselves were capable of making a proper use of the goods of the blacks. In the districts of the Upper Nile, wherever the breeding of cattle is carried on, it is a custom of the negroes never to kill an animal, but only to consume those which die naturally; the reason obviously being, that they look upon the possession of living cattle as the main object of their existence. With them, steers do the duty of guineas and napoleons; the Nubians, therefore, jocosely affirm that they swallow the guineas, which in the keeping of the heathen are nothing better than so much dead capital.

We were not long in leaving the Shillook villages far behind. The inhabited region seemed to recede as our boat made its way along the water-course. The stream divided itself into a multitude of channels, which threaded their way amidst a maze of islands. The distant rows of acacias on either side were the only tokens to indicate the mainland. This was the day on which we first saw the papyrus. To me, botanist as I was, the event elevated the day to a festival. Here at a latitude of 9° 30′ N. are we now first able to salute this sire of immortal thought, which centuries ago was just as abundant in Egypt as at present it is on the threshold of the central deserts of Africa. I was quite lost in admiration at the variety of production of the surface of the water, to which the antique papyrus gave a noble finish. It strikes

the gaze like the creation of another world, and seems to inspire a kind of reverence: although for days and weeks I was environed by the marvellous beauties which enrich the flora of the Nile, my eye was never weary of the vision of its graceful form.

The hindrances to our progress caused by the excessive vegetation began now to give us some anxiety. All day long we were bewildered not only by the multiplicity of channels, but by masses of grass, papyrus, and ambatch, which covered the whole stream like a carpet, and even when they opened gave merely the semblance of being passages. It is quite possible that the diversion of its course to the east, which, for sixty miles the Nile here takes, may check the progress of the stream, and be in a measure the cause of such a strange accumulation of water-plants. Certain it seems that neither any exceptional depth of water, such as may occur in particular years, nor yet any general overflow wider than usual, avails to exercise the slightest influence upon this exuberant vegetation. Were it a coating of ice it would split itself into fragments under the pressure of the stream, but here is a real web of tough tangle, which blockades the entire surface. Every here and there, indeed, the force of the water may open a kind of rift, but not corresponding at all with the deeper and true channel of the stream. Such a rift is not available for any passage of the boats. The strain of the tension, which goes on without intermission, has such an effect in altering the position of the weedy mass, that even the most experienced pilot is at a loss how to steer, consequently every voyage in winter is along a new course, and through a fresh labyrinth of tangle. But in July, when the floods are at their highest, navigation can be carried on along well nigh all the channels, since the currents are not so strong, and the vessels are able to proceed without detention to their destinations.

Thick masses of little weeds float about the surface of the

water, and by forming a soft pulp, contribute an effectual aid to bind together the masses of vegetation. Like a cement this conglomerate of weeds fills up all the clefts and chasms between the grass and ambatch islands; which are formed in the back-water where the position is sheltered from the winds and free from the influence of the current.

There are two plants, at a superficial glance hardly distinguishable, which perform the largest share in the formation of this compact web. One of them is the thin-membraned water-fern, the *Azolla;* the other (which is quite familiar to every visitor to the tank of the *Victoria regia*) being the *Pistia,* which can hardly fail to recall a head of lettuce. The sailors of the White Nile call it the "negro tobacco," probably with reference to the dwarfed growth of the two kinds of tobacco in the negro lands. Besides these, our duck-weeds (*Lemna*) and Tussieua of various sorts intertwine themselves with the mass, and the different African representations of our commonest water-plants play a part by no means unimportant.

It is remarkable that in Egypt nearly all the species of water-plants which abound in the stream of the White Nile are wanting entirely; whilst, on the other hand, all the shore-shrubs, which had their native home in the neighbourhood of the Equator, pass over the intervening districts and there find a settlement. Even the conspicuous ambatch is, in Egypt, not known by name; and it is quite an event when any of the fragments of the papyrus find their way so far north. Every bit of wood which the river carries in its flood is collected by the inhabitants of the Nubian valley, and not a scrap escapes the keen look-out of the people, who are eager to compensate for their lack of firewood. At the season when the waters are at their height, the chase after floating wood is a daily occupation and a favourite engagement of the boys.

On the 8th of February began our actual conflict with this

world of weeds. That entire day was spent in trying to force our boats along the temporary openings. The pilots were soon absolutely at a loss to determine by which channel they ought to proceed. On this account two vessels were detached from the flotilla to investigate the possibility of making a passage in a more northerly direction. Two hundred of our people, sailors and soldiers, were obliged to lug with ropes for hours together to pull through one boat after the other, while they walked along the edge of the floating mass, which would bear whole herds of oxen, as I subsequently had an opportunity of seeing.

Very singular was the spectacle of the vessels, as though they had grown in the place where they were, in the midst of this jungle of papyrus, fifteen feet high; whilst the bronzed, swarthy skins of the naked Nubians contrasted admirably with the bright green which was everywhere around. The shrieks and shouts with which they sought to cheer on their work could be heard miles away. The very hippopotamuses did not seem to like it; in their alarm they lifted their heads from the shallows in which they had stationed themselves for respiration, and snorted till the gurgling around was horrible. The sailors, concerned lest by their bulk these unwieldy creatures should injure the boats —not an unknown occurrence—gave vent to the full force of their lungs. This unearthly clamour was indeed the solitary means of defence at their command; in such a turmoil —men and boats in every direction—firing a shot was not to be thought of.

This extraordinary grass-barrier had already been met with at the time of Miss Tinné's expedition in 1863; here again in the summer of 1872 was it found, strong as ever, offering for months its serious impediments to navigation, and threatening to expose the crews to destitution, if their provisions should fail. The enterprising expedition of Sir Samuel Baker, in 1870–71, suffered repeated hindrances at

I. THE VESSELS IN THE GRASS-BARRIER. P. 106.

this spot. An attempt was made to employ machinery to penetrate the mass, but steam-boats proved to be even less successful than the ordinary boats in making any headway. The conflict in these waters by means of wind and steam recalls what is not unfrequently seen in Egypt when a lot of men try to drag a donkey through the mud.

In this laborious fashion we had to toil on for several days. It was only by one of the side-arms of the blockaded main-stream that it was possible to reach the mouth of the Gazelle River. To this backwater the sailors give the name of "Maia Signora," because the access to it is stated to have been discovered by the pilots who conducted Miss Tinné. Ever since the formation of the grass barrier (*el Sett*) there has been no approach to the river of Gondokoro, the Bahr-el-Gebel, except by a long side-arm called the Giraffe River, which is itself almost equally blocked up. Upon the whole we were more fortunate than our predecessors of previous years, because our journey chanced to fall during one of the periodical seasons when the growth of the ambatch is at a standstill. It happened therefore that of the three obstacles which (besides the current and the shallows) are generally to be expected, viz., grass, papyrus, and ambatch, one of the most important did not occur. The close of our first day's exertion found us at night-fall on the southerly side of an island in mid-stream, whence we witnessed a spectacle striking in its way. Through an immense grove of acacias seventy feet high (*A. verugera*), which were remarkable for their resemblance to pine-trees, there gleamed, with the glare of day, the light of huge bonfires of faggots, which the Shillooks had kindled on the opposite bank, and which gave to the tall trees the effect of being truly gigantic.

Here on the 9th we tarried, and as it was the last woody district upon which we could reckon until we arrived at the mouth of the Bahr-el-Arab, we set to work to repair our broken sailyard. We were close now to the region of the

Nueir: and on the steppes beyond the wood, we could see troops of them moving backwards and forwards; but they kept at a distance, and showed no disposition to open any negotiations with us. Footprints and various other indications leave no doubt but that this district is the playground of elephants, giraffes, wild buffaloes, and hyenas. Maraboo storks were abundant, and would often come tolerably close to the resorts of men, but as soon as they found themselves observed were careful to keep at a safe distance. During our progress along the river I brought down very many of these birds, and secured a quantity of their valuable feathers. These I sent to Europe, and at a bazaar for the benefit of the sick and wounded they realised a considerable sum. Maraboo feathers fetch higher prices than ostrich feathers, yet it is very remarkable that they are quite unknown in the commerce of Khartoom.

The temperature of the preceding days had been singularly fresh, and consequently the plague of flies, from which previous travellers had had to endure so much, did not at all molest us. We were, however, provided on board with all the appliances to protect ourselves from this nuisance, in case of need. Far into the night after these days of prolonged exertion resounded the songs of the Nubians, and the gourd-shells of merissa beer went round amid the native strains of Berber and Dongola. As I did not thoroughly understand the dialect of Dongola, I continually lost the exact purport of the words which were sung. One with the other the Nubians often use this dialect, although they just as frequently speak Arabic. Every now and then as they sung I made them tell me the sense of separate sentences; my listening to them seemed to delight them all, and I heard them saying behind my back, "Pity that the man is not a Mussulman, or at least a Turk, then what a capital fellow he would be!" To which another replied, "Turk, indeed! who ever heard of a Turk troubling himself about our songs? The

Franks are worth a thousand of them!" The flattery took its effect upon me, and I was moved at once to deliver a regular homily to my people. Feeling like Cæsar among the pirates, I proceeded to say, "Did you ever hear, you rascals of cow-stealers, about those ancestors of yours, the Ethiopians of Meroë?" "Yes, indeed," rejoined the Nubians, "for many and many a verse did our ancient poets compose about them, to celebrate their virtue; and they used to declare about the ruler of the gods (for at that time we believed in many gods) if he couldn't be found in heaven it was because he was lingering amongst his darling Ethiopians on earth. But now, we have Allah, the great Allah; besides Allah we care for no other."

"All very well;" I replied; "but where is the poet who can sing about his love to you, incorrigible thieves as you are? Just mind then what you are about for the future, and try to show that you are not unworthy of your great ancestors."

The next day was again employed in unrelaxed endeavours to penetrate the grass-bound channels. The patches of papyrus became at once more frequent and more extensive, and here once again, after being long missed, is found the genuine Nile reed, the "shary" of the ancient Egyptians—the same as the soof of the Bible—which always grows on the shores of the mainland. Somewhat strangely the prevailing river-grass in the upper waters, the *Vossia procera*, is called in Arabic "Om-Soof," the mother of wool. This appellation it derives from the peculiar hairy character of its leaf-sheaths. These have the disagreeable quality of covering the entire bodies of those who may be at work in the grass with a thick down of adhesive bristles. The sharpness of these and the scratches they inflict increase the irksomeness of the daily labour at the grass barrier. Still the great prairies amidst which the flood pursues its course afford an inexhaustible pasturage; cattle, sheep, and horses, all graze

upon them, and no herbage is there that they prefer to the "Om-Soof." At the close of the day, we again arrived in open water, and laid up for the night by the left bank, which presented a wide steppe entirely bare of trees.

Up with the sun, with sails hoisted with a moderate breeze in our favour, off we were on the following morning; short-lived, however, was our propitious start. Too soon the open water branched out into a labyrinth of channels, and the bewildered navigators lost all clue as to the actual direction of the stream. The projections of the green islets were always crowned with huge clumps of papyrus, which here grows in detached masses. It probably delights most in quiet waters, and so does not attain to the form of a high unbroken hedge, as on the upper banks of the Gazelle, for here, on account of the numerous stoppages, the stream flows through the narrow channels with extraordinary violence. The strength of the stream often makes towing impracticable, and the sailors often have considerable difficulty in sailing through it to the papyrus bushes, when they want to attach to their solid stems the ropes which are thrown out from their boats. This was the way in which we from sheer necessity sustained the resistance of the current. The depth of the channel was quite sufficient in itself to allow us to proceed, as our vessels drew only three feet of water; but the passage had become so contracted that at sunset we fastened ourselves to the papyrus-stems, quite despairing of ever being able to make further progress in this direction.

It was one of those marvellous nights when the unwonted associations of a foreign clime seem to leave an indelible impression on the memory of the traveller. Here were the dazzling sparks of the glow-worm, glaring upon us like a greeting from our far-off home, and in countless masses glittering upon the dewy stalks of the floating prairie. In the midst of these were fastened our boats, hemmed in as firmly as though they were enclosed by polar ice. Loud

was the rushing of the stream as it forced a way along its contracted course; but louder still was the incessant splashing of the emerging hippopotamuses, which had been driven by the vessels, as it were, into a corner, and were at a loss, like ourselves, how to go on or to retreat. Until daybreak their disquietude continued, and it seemed as though their numbers kept increasing, till there was quite a crowd of them. Already during the afternoon they had afforded a singular sight: whilst about half of our men were wading in shallow water and straining at the ropes, they found that they had entirely enclosed no less than six hippopotamuses, whose huge flesh-coloured carcases, dappled with brown, rose above the surface of the water in a way but rarely seen. A cross-fire was opened upon them from several vessels, but I could not make any use of my elephant rifle, because about 200 of our men were towing upon my line of sight. The clumsy brutes snorted and bellowed, and rolled against each other in their endeavours to escape; their ponderous weight bore down the tangle of the water-growth, and the splashing was prodigious.

Four days had now been consumed in this strain and struggle; after a final and unavailing effort on the fifth day, there seemed no alternative but to go back and make trial of another and more northerly branch of this bewildering canal-system. We succeeded in our retrograde movement so far as to attain an open basin, and found that we had only the distance of about 200 feet to get over, in order that we might reach the spot whereat the various streams of the Upper Nile unite. This place on the maps is distinguished by the name of Lake No, but the sailors always call it Mogren-el-Bohoor, *i.e.*, the mouth of the streams. The difficulties which met us here were apparently quite hopeless. Our boats were not only heavily laden with corn, but, formed of the heaviest wood, their build was unusually broad and massive. Yet heavy and unwieldy as they were there was

no alternative than literally to drag them over the grass. By dint, however, of main force, before the day was out the task was accomplished. The grass mass itself was lifted and pushed in front, whilst the men turned their backs against the sides of the boats, and pressed them on from behind. I was the only passenger to remain on board, because being fearful of a chill which might result in fever, I could not venture into the water.

What the maps call Lake No is merely the expanded mouth of the meeting waters. The current flowing from the south from the Bahr-el-Gebel passes along its apparent shores, which are projecting masses of papyrus. In order to reach the Gazelle it is necessary to bend westwards along the gradually narrowing lake-basin. At no season of the year is this water otherwise than shallow; even at the time of our retrograde voyage, when the floods were highest, we stranded more than once. Floating islands of papyrus of considerable extent were visible every here and there, and broke the uniformity of the expanse.

The passage which leads to the Gazelle has the essential properties of running water, although the stream itself is in winter scarcely perceptible. The river, however, is surrounded by such a multiplicity of backwaters and waters remaining in old river-beds, that the united volume of such a number of streams as I saw emptying themselves into it, at various times, through some hundreds of miles, could not possibly find its exit through this single channel alone. Petherick, in 1863, at the period when the water-floods were as low as possible, estimated the volume of waters to be rolling on at the rate of 3042 cubic feet a second; but he must have referred simply to the navigable channel at the mouth, without intending to represent that the calculation referred to the entire mass of the waters.

It remains still a matter of dispute which of the two currents should be considered as the main stream. Accord-

ing to analogy, as the Sobat is related to the Blue Nile, so the Bahr-el-Gebel is to the Bahr-el-Abiad, just as the Blue Nile is to the Nile of Egypt.

One of the objects contemplated in my journey was to show the importance of the western affluents of the Nile which unite in the Gazelle; and I have given evidence that, one way and another, they traverse a region of not less than 150,000 square miles. When I mention that in 1863 Speke called the Gazelle "an unimportant branch,"* and moreover that Baker has spoken of its magnitude with great depreciation, in reply, I might allude to another interesting fact in geographical annals. Not only did Bruce, a hundred years ago, suppose that he had discovered the sources of the Nile in Abyssinia, just where a hundred years previously they had been marked upon the Portuguese maps; but he represented the Bahr-el-Abiad as an inconsiderable stream, which joined the stream of his discovery at Halfaya, Khartoom at that time being not in existence. But it is absolutely impossible that Bruce could have returned from Sennaar to Berber along the left bank of the Blue Nile, and could have crossed at its mouth from the very spot where Khartoom now stands, without being aware that close behind him there was rolling its waters a stream as broad again as the Blue Nile. The record of his travels does not contain one word about the White Nile. The plain truth is that the White Nile was overlooked and disparaged, because it would have thrown his Blue Nile in the shade.† Ismail Pasha was quite right in saying that every fresh African traveller had his own private sources of the Nile; but for

* Speke, p. 609: "We found only a small piece of water, resembling a duck-pond buried in a sea of rushes."

† The words of the far-famed traveller are:—"It runs from Sennaar past many considerable villages, which are inhabited by white men of Arabia. Here it passes by Gerri [now Khartoom], in a north-easterly direction, so as to join the Tacazze."—Bruce, b. vi. c. 14.

my part I am not at all ashamed to confess that I have not found them.

The wind was favourable, and so long as the course maintained a north-westerly direction we made a rapid progress. The main channel gradually contracted, however, and deviated into many abrupt meanderings, which had to be traversed by pushing and driving with poles. Here, too, the apparent banks consisted of floating grass-tangle, though further off the pasturing herds of the Dinka showed the true position of the mainland, whilst the ridge of forest beyond indicated the limit to which the inundations had extended. North of the mouth of the Gazelle the boundaries of the Shillooks and the Dinka meet each other, and the intervening territory is inhabited by the Nueir.

In some places amongst the grass-tangle I made an attempt to botanize, and out of the numerous holes I fished up a variety of most interesting plants. The Gazelle is specially noted for the beauty of its water-lilies (*Nymphæa stellata* and *N. lotus*). Blossoms of these, in every variety of hue—white, blue, and crimson—well-nigh everywhere adorn the surface of the water; rooted below they project their long stalks and leaves through the apertures, like fishes, in the winter, to catch the air through holes in the ice. Should any one make a grasp at a blossom and fail to make good his hold, it may happen that the entire plant will make an elastic rebound and disappear beneath the grass. During the afternoon our course was N.W. and W.N.W., which is the general direction of the Gazelle throughout its lower half. The stream became wider again, the banks continuing to be lined by an impenetrable grass jungle. Remarkable dark-coloured water-birds (*Plotus melanogaster*) are found in considerable numbers upon the shores, intent upon making prey of small fishes. They settle upon the bushes, and one may every now and then be seen to make a sudden dive into the water, bring up a little fish in its beak, and resume its previous perch. Amongst

the people of Khartoom this bird is called the "Ghattas," a name which invested it with a special interest to me as being the name of my temporary protector.

For some few days past, just before sunset, great masses of tiny green flies had made their appearance. Although these were in no respect injurious, yet the buzzing they made and the choking cough which was caused by their numbers were anything but agreeable. Shortly after dark they retreated, only to appear again in the early dawn. Much more pertinacious were the spotty-legged gnats, which now began to torment us when the nights were not cool enough to disperse them. Everybody on board had provided himself for protection with a sack made of calico in which he slept, the result of which was ordinarily a temperature of some 80° Fahr., about the same as a regular vapour-bath. These gnats did not buzz about with so loud a noise, but their sting was much more decided. They might not cause such a lasting itching as some of their northern kindred, but the knack they had of finding a way for their proboscis through the thickest cotton till it reached one's skin, made it only possible to keep them off by means of mosquito-nets. But altogether I reckoned this visitation as hardly worth the notice of a traveller who had grown up amongst the gnats of the teeming marshes of the north.

The Bahr-el-Ghazal may in some respects be compared to the Havel as it flows between Potsdam and Brandenburg; the two rivers are not dissimilar in their excess of floating vegetation, composed of plants which, to a great extent, are identical in their generic character. Frequently the breadth is not more than enough for a single vessel, but the depth could not be fathomed by our longest poles, and so revealed what was the enormous volume of water concealed by the carpet of grass for two hundred paces on either hand. What ordinarily appears to be land assumes at high water the aspect of an extensive lake. The general uniformity of level prevents

any extensive range of vision; but I had only to mount the roof of my cabin, and, by observing the distance between the woods that skirted the prospect, I could approximately estimate the width of the river-bed. Nowhere did it appear

Balæniceps Rex.

to me to extend, like the valley of the Egyptian Nile, to a breadth of eight miles; and certainly, without further evidence, I cannot agree with former travellers, who describe it as being a lake or marsh of which the boundaries are unlimited.

Neither crocodiles nor hippopotamuses are here to be observed. The absence of settled river-banks prohibits the Upper Nile from being the resort of the former; the deficiency of sand-banks would permit no life to the latter, which therefore make good their retreat to the narrower streams of the interior.

The second day of our voyage along the river brought us to the district tenanted by the Nueir. We found them peacefully pasturing their flocks and herds beside their huts, and betraying nothing like fear. They had been represented to me as an intelligent people; seeming to know what they had to expect or to dread, they were disposed for friendly intercourse with the Khartoom people, who, in their turn, were not inclined to commit any act of violence upon their territory. Two years and a half later, at the period of our return, all this was unfortunately changed, and landing was impossible.

Most of the Nueir villages lie on a spot where the Gazelle makes a bend from a north-east to a south-westerly direction. As we were making our way past the enclosures which lie on either side of the stream, my attention was arrested by the sight of a number of some of the most remarkable birds that are found in Africa. Strutting along the bank, they were employing their broad bills to grope in the slimy margins of the stream for fish. The bird was the *Balæniceps Rex*, a curiosity of the rarest kind, known amongst the sailors as the Abu-Markoob (or slipper-shape), a name derived from the peculiar form of its beak. It scientific name is due to the disproportionate magnitude of its head. Before 1850 no skins of this bird had been conveyed to Europe; and it appeared unaccountable to naturalists how a bird of such size, not less than four feet high, and of a shape so remarkable, should hitherto have remained unknown; they were not aware that its habitat is limited to a narrow range, which it does not quit. Except by the Gazelle and in the central

district of the Bahr-el-Gebel, the Balæniceps has never been known to breed.

The first that appeared I was fortunate enough to hit with a rifle ball, which wounded it in its back, and brought it down: we measured its wings, and found them to be more than six feet across. Another was struck, but although it was pursued by an active party of Nubians, it effected an escape. As generally observed, the bird is solitary, and sits in retired spots; its broad beak reclines upon its crop, and it stands upon the low ground very much as it is represented in the accompanying illustration: it rarely occupies the ant-hills which every here and there rise some feet above the vegetation. The great head of the bird rises over the tall blades of grass and ever betrays its position. Its general structure would class it between a pelican and a heron, whilst its legs resemble those of a maraboo; it snaps with its beak, and can make a clattering noise like the stork. This Balæniceps would seem to furnish a proof that not everything in nature is perfectly adapted to its end, for when the birds are full grown, they never have their beaks symmetrical. The upper part does not correspond with the lower; the two members fall apart, and, like an old woman's jaws, go all awry. The colour of their plumage in winter is a dingy light brown, their wings are black, and they seem to fly with difficulty, carrying their ungraceful heads upon their necks at full stretch, like a heron. They build in the rainy season, always close to the open water, forming their great nests of ambatch-stalks.

At the next groups of huts we made a stop, and did some bartering with the Nueir, who brought sheep and goats for exchange. Here, in the heart of the Nueir population, in a district called Nyeng, we fixed our quarters until the 16th. I made use of the time to spend the whole day in my ambatch-canoe, collecting the water-plants from the river.

The Nueir are a warlike tribe, somewhat formidable to the

Dinka. They occupy a territory by the mouths of the two tributaries of the White Nile, and are evidently hemmed in by hostile neighbours. In most of their habits they resemble alike the Shillooks and the Dinka, although in their dialect they differ from both. The pasturage of herds is their chief pursuit. The traveller who would depict their peculiarities must necessarily repeat much of what he has already recorded about the other tribes. With regard to apparel it will suffice to say that the men go absolutely naked, the women are modestly girded, and the girls wear an apron formed of a fringe of grass. Their hair is very frequently dyed of a tawny-red hue by being bound up for a fortnight in a compo of ashes and cow-dung; but occasionally it is cut quite short. Some of them weave cotton threads into a kind of peruke, which they stain with red ochre, and use for decoration where natural locks are not abundant. Their huts resemble those of the Dinka; always clean, the dwellings are surrounded by a trampled floor; the sleeping-place inside is formed of ashes of cow-dung, burnt perfectly white, and is warmer and better than any mosquito-net.

Nowhere in the world could a better illustration be afforded of the remarkable law of Nature which provides that similar conditions of existence should produce corresponding types amongst all ranks of animal creation. It does not admit of a doubt that men and beasts in many districts of which the natural features are in marked contrast to the surrounding parts do exhibit singular coincidences, and that they do display a certain agreement in their tendencies. The confirmation of this resemblance which is offered by the Shillooks, the Nueir, and the Dinka is very complete; these tribes, stationed on the low marshy flats which adjoin the river, are altogether different in habit to those which dwell among the crags and rocks of the interior. "They give the impression," says my predecessor Heuglin, "that amongst men they hold very much the same place that flamingoes, as

birds, hold with reference to the rest of the feathered race;" and he is right. The dwellers in these marsh-lands would probably have a web between their toes were it not compensated by the flatness of their feet and the unusual prolongation of the heel. Another remarkable similarity is the way in which, like the birds of the marshes, they are accustomed for an hour at a time to stand motionless on one leg, supporting the other above the knee. Their leisurely long stride over the rushes is only to be compared to that of a stork. Lean and lanky limbs, a long, thin neck on which rests a small and narrow head, give a finishing touch to the resemblance.

Leaving the last dwellings of the Nueir behind us, we arrived on the following day at the first wood which is to be observed on the banks of the Gazelle. Ant-hills of more than ten feet high are here scattered in every direction, and alone break the universal levelness of the plain. They are not unfrequently found in the heart of a thicket, because originally the stem of a tree served as the central axis of the earthy structure. Dead and withered though this had been, it sprouted out afresh from the roots, provided that these had been uninjured by the passages of the ants. Vestiges of the floods are traceable upon them, and show that the average difference between the highest and lowest level of the water is from three to four feet.

The river wends its way through charming wood-scenery, meandering amidst groves gay with the red bindweed (*Ipomæa*), amidst which now and then a tall tamarind uprears itself. Here I met with a fresh representative of the flora of Central Africa in the tree-like Euphorbia with its arms outspread like candelabras. This can be distinguished from the Euphorbia of the Abyssinian highlands, mentioned in Chapter I., by the involved confusion of its branches. Its eccentric shapes would seem to fill a place in Africa which in America is supplied by the order of the Cactaceæ; it also

serves like the Mexican Cereus for the enclosure of estates, as slips taken from its branches readily take root in the ground. The sportsman could here reckon on a good bag, for the widow-ducks which swarmed upon the papyrus were brought down at every shot, and were serviceable for the table. Our people were all expert swimmers, and they continually fished out of the stream the birds which were struck, while their sport in no way ever hindered the progress of our craft.

The wind next day was not propitious, and the boats were obliged to stay beside a grass tangle by the bank. I made use of the detention to enjoy a little fishing for water-plants. The water-lilies surpassed all description, and would adorn any Victoria-house. Unfortunately I could not succeed in transferring to this region the queen of the waters. The *Victoria regia* seed, which I had brought for the purpose in pots, would never germinate; perhaps, although it was preserved in water, the heat of my cabin during my voyage was too great and destroyed its vitality. I can only boast of having naturalised in this district of Central Africa two plants as representatives of culture in Europe—the sun-flower and the tomato. The river, which is ordinarly about 300 feet wide, abounds in thick masses of potamogeton, trapa, and yellow ottelia. The seeds of this last plant much resemble the sesamum, growing like the seeds of the Nymphæa in a slimy gelatinous mass; they are collected by the natives, and, after being dried, are pounded down into a sort of meal, which the sailors of Khartoom assured me was a wholesome and excellent remedy for indigestion. It surprised me very much to learn that the eatableness of the water-nut (*Trapa*) was unknown to the Dinka, although it grew in such abundance on the river.

We landed, towards evening, close below the mouth of the Bahr-el-Arab in a forest of lofty trees, where the West African *Stephegyne* appears to find its extreme eastern

limit. The wood of this species of Rubiaceæ is somewhat soft and light, but its branches make masts for the boats of a strength and straightness unequalled by any other growth in these countries, where wood adapted for erections of any sort is so notably scarce.

The Gazelle, at the place where the Bahr-el-Arab empties itself, has a width of about 1000 feet. This mouth is itself not much less, but just above the mouth the condition of the Gazelle is so different that it must be evident to every sailor that the Bahr-el-Arab plays a very important part in contributing to the entire system.

What the sailors mean by the Bahr-el-Ghazal is really only the channel as far as they navigate it; to them it is not a stream, in a hydrographical sense, such as either the Bahr-el-Arab or the Bahr-el-Dyoor. It is only at the mouth of the Bahr-el-Arab that there first appears a measurable current, and the fairway, which up to that point is not above 15 feet deep, is subsequently never less than twice that depth. After getting every information I could in the remotest west, I come to the conclusion that the Bahr-el-Arab is the main stream. Even at a distance of 300 miles above its mouth it is found throughout the year as a stream which cannot be forded, but must be crossed in boats, whilst the Bahr-el-Dyoor cannot be traced at all at so great a distance from its union with the Nile. The plains through which the Gazelle flows are too level to allow of any recognition at first sight of the true limits of the territory subject to its inundations. Any one, however, who is familiar with the character of the vegetation of the country, will easily detect symptoms from which he could form a tolerably correct opinion. Accordingly, on my return journey in 1871, I gathered ample evidence to satisfy myself that the Gazelle, associated as it is with the Bahr-el-Arab and the Bahr-el-Dyoor, is a river just as truly as either of the others. The fall of the water in the Gazelle is only produced by the tor-

rent driven from the south and west, and may hardly admit of being estimated, since the entire difference measured between Khartoom and the Meshera (the termination of the navigable course) does not altogether amount to 100 feet.

An important change in the scenery of the shores supervenes upon a further progress. The lake-like surface of the water gives to the Bahr-el-Ghazal the semblance at first sight of being merely an extensive backwater. That just above the mouth of a stream so considerable as the Bahr-el-Arab there should be this abundance of water at the very time of the year when it is at its lowest ebb, is a circumstance which cannot fail to confirm the supposition which I entertained when I entered the Gazelle: I was certain that the narrow channel through which we travelled in the district of the Nueir could not possibly be the entire river; and there surely must exist to the north of the river other not inconsiderable arms, which are inaccessible on account of the denseness of the river grass.

Unhindered by any material obstacles, our course now lay between floating islands, which were partly adorned with variegated blossoms, and partly loaded with a luxuriant growth of splendid ferns. The poles sufficed to keep the boats from the floating vegetation, the masses of which were as unyielding as though they had been sheets of ice. It was evident by the motion of these masses, that the current, though it flowed languidly, had a continued progress towards the east. The river only varies in depth from about 8 to 14 feet. The bed presents the appearance of a meadow, in which little bright tortoises enjoy their pasture. This submerged sward is composed exclusively of the Ethiopian vallisneria, of which the female blossoms, affixed to spiral peduncles, rise from a fathom deep to the surface of the stream, their coiling stalks extending far and wide. Very wonderful is this plant in its sexual development; its

northern sisters haunt the waters of the Po and of the Rhone, and have furnished a theme for the admiration of the poet.

Far away, on either side, beyond the flooded borders of the grassy river-bed could be discerned, at a distance of a league or two, large tracts of forest land; and between the river and the line of woods which stretched to the horizon there could be observed the cumbrous shapes of elephants going to and fro, and demonstrating that there at least the land was firm.

The channel, which we rapidly passed along under favourable breezes, became continually broader, and the nearer we approached the river source, the more the banks seemed to recede from each other. The sight of men, fishing out of canoes formed by a couple of hollow stems being fastened together, made us aware that we were approaching the dwellings of the Dinka, and soon after we came upon the enclosures for cattle surrounded by low thatch huts upon the left bank. Sailing on towards the south and south-east, we approximated to the limit of our voyage. A great cracking up in the air revealed to us that the sailyard had once more broken, so that it was only by main force, by pushing and pulling, that we managed to reach a large Dinka village, which lay on the west, almost at the extremity of the stream. Here was the *cul-de-sac*, to which the Dinka have given the name of the Kyt. We had quite recently passed the mouth of the Dyoor, which appears to separate into several streams; but if my attention had not been called to this circumstance by the Reis, I should certainly never have observed it, on account of the uniform features of that watery region. In our delight at having so quickly, and without misadventure, accomplished our passage up the Gazelle, we had a night of feasting and merry-making.

The remainder of the journey was soon completed, and in the early morning hours of the 22nd of February we found ourselves at the Meshera, the landing-place of all who resort

to the Gazelle. This place is marked in the maps as Port Rek, called so from the Rek, a section of the Dinka. These Rek people were the first allies among the natives that the new comers had acquired, and they had been accustomed to provide them with bearers long before the Khartoom merchants had established any settlements in the interior. Deducting the days on which we had not proceeded, our boats had taken thirty days in going from Khartoom to the Meshera. I had been anxious to make a good investigation of the river banks; otherwise the voyage might easily be accomplished in twenty days.

Above the mouth of the Dyoor, so difficult of access, the deep channel is continued for a space of sixteen miles, when it forms the *cul-de-sac* which I have mentioned: there is not the least current when the waters are all at their height; but in March and April there may at some places be observed a retrograde motion of the stream. It is manifestly an ancient bed of the Dyoor, or of some river which in the lapse of time has changed its course. It is not easy to explain it, but the stream seemed to me, as I think I could farther demonstrate, the navigable overflow of some inland liman, that is, the receptacle of a number of considerable rivulets meeting together, something like what the delta of the Canton river would be, if it could be levelled, filled up, and carried away inland. The uniform depth of the channel might seem to originate in some freak in the conformation of the ground, or of the masses of vegetation, which are irregularly scattered about; but really it is only an indication of a condition of things long passed away, when the mainstream flowed through better defined and more contracted borders.

Let us for a moment review the impressions we have gained. The volume of water brought by the Gazelle to swell the Nile is still an unsolved problem. In the contention as to which stream is entitled to rank as first-born

among the children of the great river god, the Bahr-el-Ghazal has apparently a claim in every way as valid as the Bahr-el-Gebel. In truth, it would appear to stand in the same relation to the Bahr-el-Gebel as the White Nile does to the Blue. At the season when the waters are highest, the inundations of the Gazelle spread over a very wide territory; about March, the time of year when they are lowest, the river settles down, in its upper section, into a number of vast pools of nearly stagnant water, whilst its lower portion runs off into divers narrow and sluggish channels. These channels, overgrown as they look with massy vegetation, conceal beneath (either in their open depth, or mingled with the unfathomable abyss of mud) such volumes of water as defy our reckoning. The Gazelle then it is which gives to the White Nile a sufficient impetus to roll its waters onward; subsequently the Bahr-el-Gebel finds its way and contributes a more powerful element to the progress of the stream. It must all along be borne in mind that there are besides two other streams, the Dyoor and the Bahr-el-Arab, each of them more important than any tributary of the Bahr-el-Gebel; and these bring in their own influence. To estimate aright the true relation of all these various tributaries is ever opening up the old question in a new light.

The ramifications above the mouth of the Bahr-el-Arab are very complicated, and must be very imperfectly traced on our present maps. The map issued by Lejean has many details, but must be accepted with caution, and requires us to remember that paper is patient of error as well as of truth. Whoever has traversed the lakes (so to call them) to the west of the Bahr-el-Arab, has, almost immediately beyond the mouth of the Dyoor, come upon the winding channel known as "the Kyt." The shores of the Kyt are firm; there are detached groups of papyrus driven by the wind sometimes to its one bank, and sometimes to the other; its waters rise and fall, but

have no other apparent motion; it widens at its extremity into a basin of papyrus, which was now open, but which in 1863 was entirely choked by ambatch. Heuglin, at that date, discerned, as he thought, in the dwindled and distorted stems a prognostication of an approaching disappearance of the ambatch; and from 1869 to 1871 there was no trace of it. Various openings are made by the water towards the west among the masses of papyrus, which enclose a labyrinth of little wooded islets.* One of these islands is the resting-place for the boats, and close at hand the voyagers establish their temporary camp. Being surrounded on every side by the water, all is secure from any hostile attack. The regular landing-place is on the southern shore of the basin, and thence commence the expeditions to the interior.

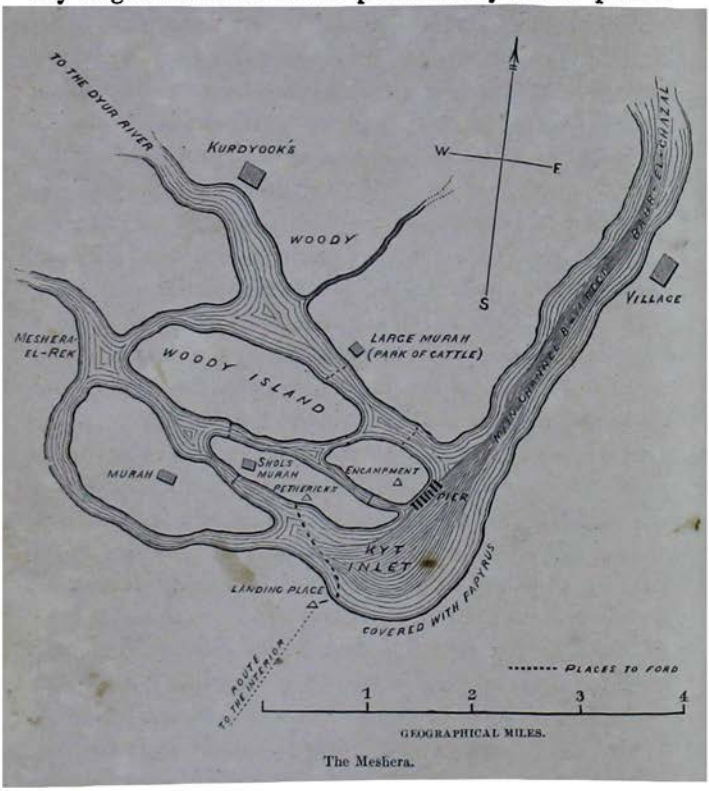
Such is the channel which, from the times of the earliest explorers, which appear to extend from the date of Nero's centurions, mentioned by Seneca, up to the mercantile enterprises and voyages of discoveries of the last ten years, has always brought boats to that *cul-de-sac*, called by the Nubian sailors their Meshera. The first boat, which actually entered the Gazelle, was that of a Khartoom merchant, named Habeshy, in 1854; two years later followed Consul Petherick, the first to open mercantile transactions with the tribes resident in these remote regions.

At that time, when nothing was known either of the Dyoor or of the Bahr-el-Arab, it must have been no small surprise to the first explorers to see a stream so large suddenly end amongst a labyrinth of small islands, without any navigable affluent. Only by the help of a native pilot was such a discovery possible.

I was compelled to linger out the remainder of February and the greater part of March in camp upon the little

* In the accompanying plan it is attempted to give some general idea of this confusion.

island, pending the arrival of the bearers who were to help me onwards to Ghattas's Seriba. I was happy in escaping any ill effects such as might be dreaded from a protracted residence by this unhealthy river. I attributed my immunity in great measure to the precautionary use of quinine.



The Meshera.

Although by my daily occupations, botanising in swamps and continually wading amongst papyrus clumps, I had been more exposed to malaria than many others, I experienced no sickness. I swallowed every day, in three doses, eight or nine grains of quinine, enclosed for that purpose in gelatine capsules; this method is to be strongly recommended to every

traveller, since the intense bitterness of the medicine taken in its undisguised form may excite a degree of nausea which, I can well believe, may contribute its part to a liability to fever. This treatment I continued, without its having any ill effect upon my constitution, until I could dispense with it in the purer air of the interior. I suppose, since this is not an universal experience, that the effects of the alkaloids may vary with different patients, and therefore it would be well for every one first to test the susceptibility of his individual constitution.

It is only too well known how many victims this treacherous climate has already claimed; it may without exaggeration be maintained, that half the travellers who have ventured into the swamps have succumbed to fever. The highest mortality was in the settlements of the Austrian mission in Gondokoro and St. Cross, now long since abandoned. Miss Tinné's expedition of 1863 suffered the loss of five out of its nine European members, among them my unfortunate predecessor in the botanical investigation of this district, Dr. Steudner, who died suddenly quite at the beginning of the journey. Heuglin, too, lost the greater part of his valuable time in continual relapses of fever. The foundations of these miserable attacks had probably been laid in the miasma, of which the traveller had inhaled the poison during a protracted sojourn in the Meshera. The latest Job's comfort, which had most unnerved me, had come just as I was embarking at Trieste. The French Geographical Society had, a few months previously, sent out Le Saint, a naval officer, on a voyage of discovery, having for its object the same district as myself, viz., the Niam-niam countries. His outward journey had been much lengthened by the grass obstruction in the Giraffe stream, and he died before he entered the country in which his more extended wanderings were designed to commence.

Before quitting the Meshera (the only landing-place for

expeditions starting from the Gazelle) I will make a few observations on the natural character, scenery, and inhabitants of the region of this unique island world.

The Meshera had been reached by eighteen different boats belonging to Khartoom merchants, and these now lay, half-buried in mud and clay, firmly wedged in the jungle of papyrus. Every new comer could only by great exertions procure a fresh resting-place. For that purpose they proceeded in the following way: they backed their boat a little into the open water, and anchored; then a rope was fastened to a strong mass of papyrus-roots, which it towed with its loosened clods attached into open water, until the breeze carried over the entire floating mass to the opposite side of the basin. Thus was obtained one artificial Delos after another. The access to the bank is, however, still left blocked up by the compact border of papyrus thus conveyed across. By means of fire and hatchet avenues are then opened, and the long roots of papyrus are piled upon the elastic sward of its stubble until an available pathway is complete.

Most of the islands are adorned by graceful masses of bushes and by light groves of the larger trees, but the hatchet of strangers every year is altering this condition of things. In spite of all the uniformity of the tall papyrus bushes, and notwithstanding the burnt and dry appearance of the steppe-grasses, there is no lack, even in the mild winter of this little island-world, of the charms of scenery. The dark crowns of the evergreen tamarind stand out in sharp outline against the bare rugged branches of the acacias in their grey winter garb, between which the eccentric shapes of the candelabra-euphorbiæ, closely interlaced, bound the horizon in every direction, and form, as often as the eye wanders over the neighbouring islands, a fine gradation of endless shades of colour. This is especially noticeable in the early morning, when at sunrise a heavy mist

hangs over the damp flats, and sometimes here, sometimes there, sets limits to the prospect, in a way that would lend enchantment to any scenery.

Protected by the endless ramifications of the marshes against any attacks of dangerous quadrupeds from the mainland, the sojourner here had only the most determined of all depredators to fear, namely, man himself. But even this fear was not really great. Nowhere on the face of the earth is a country more surrendered to robbery and lawlessness than this district of Africa; but still, as ever, one form of mischief balances another: man is a match for man; and so it results that the stranger may find repose and security here as much as elsewhere. The natives, who occupy the entire land in a wide circumference from the Meshera, form a portion of the great Dinka family, whose extreme outposts extend eastwards towards the Egyptian borders of Upper Sennaar, and whose tribes are counted by the hundred.

One of the most influential personages of the neighbouring race of the Lao was a woman, already advanced in years, of the name of Shol. She played an important part as a sort of chief in the Meshera, her riches, according to the old patriarchal fashion, consisting of cattle. As wealthy as cattle could make her, she would long since have been a prey to the Nubians, who carry on their ravages principally in those regions, if it had not chanced that the intruders needed her for a friend. They required a convenient and secure landing-place, and the paramount necessity of having this induced them to consider plunder as a secondary matter. They provided in this way, that single boats, even after all others had taken their departure, could safely remain in the Meshera throughout the rainy season without incurring any risk from the natives. The boatmen accordingly respect the bank of the river which is the resort of Shol's herds; whilst Shol, on her part, uses all her influence to retain her tribe on

friendly terms with the strangers. The smallest conflict might involve the entire loss of her property.

The old Shol did not delay, but the very first day came to my boat to visit me. On account of the colour of my skin, the Nubians had told her that I was a brother of the Sigñora (Miss Tinné). My pen fails in any attempt to depict her repulsiveness. Her naked negro skin was leathery, coarse, and wrinkled; her figure was tottering and knocked-kneed; she was utterly toothless; her meagre hair hung in greasy locks; round her loins she had a greasy slip of sheep-skin, the border of which was tricked out with white beads and iron rings; on her wrists and ankles she had almost an arsenal of metal, links of iron, brass, and copper, strong enough to detain a prisoner in his cell; about her neck were hanging chains of iron, strips of leather, strings of wooden balls, and heaven knows what lumber more. Such was old Shol.

A soldier, who had formerly been a Dinka slave, acted as interpreter. For the purpose of impressing me with a due sense of the honour of the visit and in the hope of getting a present, he began to extol Shol and to enlarge upon the multitude of her cattle. All the sheep-farms, of which the smoke rose so hospitably to the stranger, were hers; hers were all the bullock runs along the river banks; the murahs which extended in every direction of the compass without exception, were hers; she had at least 30,000 head of cattle; in addition to which I could form no conception of the iron and copper rings and chains which filled her stores.

After this introduction the conversation turned upon Miss Tinné, who remained fresh upon the memory of all. Her liberality in making presents of beads had secured her a fame like Schiller's "Mädchen aus der Fremde," the spring, who brought a gift for every one. The old Shol could not refrain from expressing her surprise that Miss Tinné should be unmarried; as an African she could not comprehend how a lady that was rich could be without a husband.

Very strange were the domestic and family relationships of Shol when considered in contrast with her public position, her present influence, and her excessive wealth. After the death of her first husband she had become the wife of his son by a previous marriage. She had thus raised this man, who was younger than herself, to the rank of prince consort. His name was Kurdyook. I had a visit from him on the

The old Shol.

following day. From his intercourse with the traders he could speak Arabic intelligibly. Like the rest, he was loud in his praises of Miss Tinné, and in her honour he had called the child of one of his concubines "the Signora." Plainly there was a longing after the culture of European refinement, and let us hope that it will not stop at the name.

Of course, in comparison with his wife, he was quite destitute of lands; he was a mere cypher as far as any influence on

the tribe was concerned, but yet he exercised a terror over Shol, which, under the circumstances, was quite incredible. He was accustomed to chastise this dame, who was at once his stepmother and his spouse, and to act towards her in the most brutal manner, although she was herself in the habit, perchance as a token of her dignity, of carrying in her hand several knotted thongs like a cat-o'-nine-tails.

With rambles in the neighbourhood and in receiving a succession of visitors, I found the days pass pleasantly away. On the mainland towards the north there were several more important villages, composed of permanent dwellings and fixed enclosures for oxen. To these I constantly resorted, and the concourse of so many men coming out of curiosity to look at me, entertained me very much. Failure alike both of water and food during the dry season had driven old Shol herself to one of the islands adjacent to the landing-place; here in some wretched huts not far from our boats she had taken up her residence in the midst of a quantity of her cattle. I occasionally paid her a visit, for the purpose of penetrating to the mysteries of her dairy.

On the 26th of February the old queen came to the tent which I occupied on the island, having been informed that the presents designed for her majesty there awaited her. On this occasion she had a costume somewhat different. She had made a fresh selection of her paraphernalia from her iron rings and chains, and so arrayed herself anew. I had prepared everything for a stately reception, as I was anxious to leave behind me an impression as favourable as Miss Tinné. There were beads as large as eggs, such as never before were seen in this country; there were marbles of green and blue from the Oriental plains: she was told they were for her. Next there were chains of steel; these, too, were hers: then that majestic chair of plaited straw; she could scarcely believe that she was to have it for her throne. But the crowning charm of all was an immense bronze medal, with a chain of

plated gold, which she could hang about her neck; it was in fact, a commemoration of a German professor's jubilee, with the Emperor's likeness upon it; but no one can conceive the admiration it excited. She was really touched, and the sailors and soldiers seemed to like the medal as much as she did. The gifts which were made to me in return consisted of a calabash full of butter, a goat, a sheep, and a splendid bull of a peculiar breed, without horns.

The most remarkable plant amongst the islands of the Meshera is a climbing passion-flower—the *Adenia venenata*, the bright green leaves of which are applied by the natives of Central Africa for the purpose of drawing blisters. These leaves have, however, a poisonous property, which has proved fatal to camels. Camels have but a feeble faculty of smelling, and eat freely of whatever looks green, so that all attempts to acclimatise them here have been without success. It is the same plant which deprived Sir Samuel Baker of his pack-ass in Latuka. The most noticeable thing about the plant is the large development of its stem, which grows half under the soil, and projects with a strange protuberance some cubic feet in content. At the end of this the stem breaks out into a number of long climbing stalks, which mount upwards to a considerable height. One example of these stems I packed in linen and sent to Berlin, where, after a period of ten months, it was found to retain its vitality, and in a palm-house soon developed a number of young shoots.

The waters furnished a variety of fishes; amongst these few were more frequently seen than a sort of harness fish (*Polypterus bichir*), of which a representation will be given in a later chapter. But the creature which most particularly arrested my attention was the salamander-like fish of Gambia (*Lepidosiren*), which, with its four slim feet projecting from its fish-like form, had a mouth like that of a shark. I saw specimens between three and four feet long. Its flabby

slimy flesh is disgusting to the Nubians, although Sir Samuel Baker, who found the same species in the Albert Nyanza, could not sufficiently praise its flavour. The whole family of the Siluridæ is here represented as much as in other sections of the Nile. Many of them share with the fish-salamander the practice of burying themselves in the bank, that they may await in the dry the rising of the stream; in the same way as an eel they can wriggle themselves through the soil, and even make a way over the dry ground.

Considering the circumscribed limits of land, the feathered race were found in great variety. I saw at least sixty kinds of birds upon the four or five islands which were nearest us. Conspicuous above all was the graceful rail (*Parra africana*), with its spreading claws and wiry legs stalking proudly, as if on land, upon a carpet of water-lily leaves. And not unheard were the familiar notes of our own home birds. Sparrows innumerable thronged about the papyrus plants, on which they settled for their evening roost. All this, however, is but the old story of ornithological travellers who have been before me, and hardly needs to be repeated here.

I. VIEW ON THE MESHERA (PORT REK). A. 136.

CHAPTER IV.

Start for the interior. Flags of the Khartoomers. Comfortable travelling with bearers. The African elephant. Parting from Shol and Kurdyook. Disgusting wells in the district of the Lao. Wide sandflats. Village of Take. Fatal accident. Arabian protocol. Halt in the village of Kudy. Description of the Dinka. Peculiarities of the race. Dyeing of the hair. Nudity. "The Turkish lady." Iron age. Weapons of the Dinka. "People of the stick." Weapons of defence. Domestic cleanliness. *Cuisine.* Entertainment of the ladies. Snakes. Tobacco-smoking. Construction of the huts. Dinka sheep, goats, and dogs. Reverence for cattle. Degeneration of cows. Intestinal worms. Deficiency of milk. Large murahs. Capabilities of the Dinka. Warlike spirit. Treatment of enemies. Instance of parental affection. Forest district of the Al-Waj. Arrival at Ghattas's chief Seriba.

It was not until the eighteenth day of our sojourn in the Meshera that Ghattas's second boat arrived, conveying the remainder of the newly-enlisted mercenaries and a year's provisions for the Seriba. The agent on board was commissioned to procure for me from the interior whatever porters were requisite for my progress. The shortest possible time that must elapse before he could get to the Seriba and back was eleven days; punctually at the end of that period he returned, and placed at my disposal seventy bearers. Thus fortunately I had time enough and to spare before the commencement of the rainy season to start for the interior.

By the 25th of March all arrangements for setting out were complete, and we were ready to turn our backs upon the damp air of the swamps with its nightly plague of flies.

Several smaller companies having joined Ghattas's expedition, the number of our caravan was a little under five hundred. Of these the armed men alone amounted to nearly

two hundred; marching in single file they formed a long column, and constituted a force with which we might have crossed the largest State of Central Africa unmolested. Our course for six days would be through a notoriously hostile country, so that this protection was quite necessary; but the caravan, extending fully half a mile, was of a magnitude to require great order and circumspection. Each division had its banner, and to each was appointed its proper place in the procession. The different companies of the Khartoom merchants were distinguished by the colour of their banners, all emblazoned by the star and crescent of Islam. Instead of this, Ghattas, as a Christian, had a white flag, on which were worked the crescent and a St. Andrew's cross. This compromise between the crescent and the true cross did not, however, exclude certain passages from the Koran, relating to the conquest of unbelievers, and which could not be permitted to be wanting on any Khartoom banner. The handsome flag of my own boat was lying wrapped away in a box. I confess I had no desire to make a display of it among savages, and in a region where its meaning could not be comprehended; but even if I had wished to exhibit it, I subsequently discovered that any attempt to do so would have been quite a failure. No Nubians would on any account have followed a flag which did not bear the crescent and the passages from the Koran. The boats on the Nile, it is true, when they carry or belong to Europeans, do not despise the European colours; but in the heart of the negro country, where no Egyptian authority exists, it is different, and consequently all European flags are worthless. The banner of Islam is to them a talisman, and they would consider it as sacrilege to replace it by the banner of any Christian country. Even the trading expeditions conducted by European merchants from Khartoom have conformed to this rule, and I have myself witnessed the flag waving on the Rohl River at the last settlement maintained by the brothers Poncet.

To a naturalist on his travels, the employment of men as a means of transport appears the perfection of convenience. Apart from the despatch and order in starting, and the regular continuous progress, he enjoys the incalculable advantage of being able to reach his baggage at any moment, and to open and close again without loss of time any particular package. Any one who has ever experienced the particular annoyances of camel-transport will be quite aware of the comparative comfort of this mode of proceeding. A few asses accompanied the caravan, and the governor of Ghattas's Seriba had been courteous enough to send me his own saddle-ass, but I preferred to trust myself to my own legs. Riding a badly-saddled donkey is always infinitely more fatiguing to me than any exertion which may be requisite to keep up with the forced marches of the light-footed Nubians; besides, I had other objects in view than mere progress: I wished to observe and take notes of anything that came in my way, and to collect plants and whatever else might be of interest. Thus entirely on foot I began the wanderings which for two years and three months I pursued over a distance of more than 2000 miles. Neither camels nor asses, mules nor horses, teams of oxen nor palanquin-bearers contributed their aid. The only animal available, by the help of which Central Africa could be opened to civilisation, is exterminated by fire and sword; the elephant is destroyed mainly for the purpose of procuring for civilised nations an article wherewith to manufacture toys and ornaments, and Europeans still persevere in setting the savages a pernicious example in this respect.

There is sufficient evidence to show that the African elephant, which at the present time appears to surpass the Indian species as much in wild ferocity as in size, was formerly tamed and trained in the same way as the elephant in India. Medals have come down to us which portray the considerable differences between the two species. They show

the immense size of the ear of the African elephant, and prove beyond a doubt that it was once employed as a domestic animal. The state of torpor to which, since the fall of the Roman Empire, all the nations of the northern part of Africa have been reduced, is sufficient explanation why the worth of this animal should have been suffered to fall into oblivion. The elephant takes as long as a man to grow to maturity, and it could hardly be expected of the Arabs that they should undertake the tedious task of its training; and certainly it could not be expected of Turks, who have hardly patience to wait for the fruits of one year's growth, and who would like the world to have been made so that they could pick up their guineas already coined on the mountains. It would be no unfortunate event for Africa if some of the European philanthropists, who now squander their homœopathic charities on the welfare of the negroes, were to turn their sympathy a little to the pitiable lot which has befallen the elephant. The testimony of Burton in his 'Nile Basin' is, that not only might elephants be made useful to man, but that they appear to possess an instinct which is quite a match for the reason not only of the natives of Africa, but of some other of the bipeds who visit its inhospitable shores.

Extremely toilsome, I must own, were the first few hours of the march. After being for months limited to the boat's deck and to short excursions from my little island, I now found myself forced to keep up with the sharp pace of the negroes, which would be a matter of difficulty to any one but a member of the Alpine Club. Towards evening, after a two hours' march, we made our first halt in Shol's village. Near the huts some giant Kigelia, in full flower, displayed their purple tulip-like blossoms; they still stand as landmarks on the spot, although the old Shol has gone to her rest and the last fragments of her burnt huts have vanished. This Kigelia is common throughout Africa, and is distinguished for its remarkable fruit, two feet long, which hangs from the boughs

like a string of sausages. The leaf is somewhat similar to our walnut, and in its *tout ensemble* the tree may bear comparison with a majestic oak. Trees of such marked peculiarity cannot do otherwise than make an impression on the memory of every traveller in equatorial Africa.

Shol had come expressly from her island to take leave of us, and to offer her hospitality to the caravan. Our course now lay in a tolerably straight S.S.W. direction across the western district of the extensive territory of the unsubdued Dinka. We rested occasionally in the deserted villages and amidst the empty cattle-pens belonging to the natives, who made their escape as we advanced. By their continual cattle-stealing, the Nubians have caused all the Dinka tribes to consider foreign interlopers as their bitter enemies; the intercourse, therefore, with the settlements in the Bongo and Dyoor countries, which are separated from the river by the Dinka district, can only be maintained at the expense of keeping an adequate number of armed men to protect the porters. Agriculture, although it is carried on to a certain extent, is quite a secondary consideration. The Dinka often possess large quantities of sheep and goats, but principally they are breeders of cattle. The number of cattle in the country is astounding, and seems as if it must be inexhaustible, even when it is remembered that thousands are stolen annually by the Nubians. There are tracts of grazing ground which take a whole day to cross; murahs are scattered throughout the land like villages in Germany, and many of them would contain 10,000 beasts, unless I err in my computation, which is made by reckoning the pegs to which the animals are tethered.

Before I parted from my old friend Shol I had to make one more offering of gratitude for the hospitality I had enjoyed; this consisted of an amulet which I had to compose at Kurdyook's request. I wrote him as a testimonial a recommendation to any future visitor to the country. The

Nubians and true Arabs, in a way that is not seen in Egypt, often wear round their neck and arms a number of ornamental leather sheaths, which contain passages from the Koran; on being asked what is inside they reply, "It is the name of God." Such amulets are even bound round the necks of horses and valuable asses. It would never occur to a Nubian to ask a Frank for an amulet; they have their Faki, who make a harvest of the business. But Kurdyook was no Mohammedan; he was a pure, uncontaminated heathen, and Mohammedan prejudice had no part in his superstition; in his eyes the white man was a being of a higher order, and was accordingly in a position to exercise greater authority over the invisible powers of fate than the swarthy priest of Islam.

We now passed on through a country covered by farmsteads, repeatedly crossing fields of sorghum-stubble. The stalks, fifteen feet in length, which lay everywhere scattered on the ground, were a great impediment to our progress. The corn here cultivated is the largest form of the species; it takes nine months to ripen, and the stem in consequence becomes so hard and woody that it is no more like our European straw than their stubble-fields are like ours. At other places at this season the nature of the ground generally offered no hindrance, the clayey swamps being dry and hard as stone; the high grass of the steppe trodden down by men and cattle, the woods everywhere thin as in Southern Nubia, and consisting of isolated thickets or scattered trees of no great size.

For the purpose of geographical investigation a journey in the rainy season would be more advantageous, because it is only then that the actual limit and importance of the periodical currents are to be estimated. The term *periodical*, however, so frequently used in connexion with the hydrographical conditions of Africa, perhaps hardly gives a correct impression, since the brooks and streams which more or less are

dried up after the rainy seasons are over, still exercise their influence on the conformation of the land, just as truly, if not so obviously, as our perpetual rivers, which are permanently limited to their proper channels. Many of the rivulets in this extensive level have no apparent bed; for in proportion as the water decreases, the bed by degrees resumes its aspect of being covered with grass; the turf rapidly grows afresh as the water recedes, and, independently of this, much of it is able to endure a flood of several months without rotting or dying away. This is a circumstance which quite easily explains the misconceptions to which various travellers in the dry season have been liable, who have gone along without recognising any river-beds at all. It is not in any way surprising that they have crossed the beds of even considerable streams without perceiving in them anything different to ordinary undulations of the ground, for there is nothing to arrest the attention but the same uniform growth of grass, the same dry stubble, the same scorched, trampled stalks. Ten miles from the Meshera we reached the first watering-place in the centre of the Lao district, an open cultivated plain, several miles in extent, diversified with numerous farms and hamlets. Two fine sycamores seemed to beckon from afar and invite us to the spot.

The water had to be drawn from a depth of fifteen feet, from wells which contained nothing better than a stinking, impure pulp. These wells are the residue of great pools formed in the rainy season, and subsequently developing a wonderful abundance of animal life, although they produce nothing in any way adapted for culinary purposes. Large water-scorpions (*Belostoma*), beetles, and other creeping things that are ever at home in stinking pools, whirl about in these muddy depths. Here it is, apparently, that the Dinka cows and sheep renew annually their progeny of intestinal worms (*Amphistoma*) and cercariæ, of which the filthy beds are most prolific. Such was the drinking-water of Lao.

The natives had imagined that we should pass the night at the well; anxious, however, to take advantage of the coolness of the air, we resolved, by a forced night-march, to get quickly over the district, void of water, that lay before us. Marching on through the adjacent farms we noticed old and young hurrying off into the adjacent thickets, our arrival being unexpected. Many a smoking porridge-pot had been forsaken, and now fell into the hands of the greedy bearers, making them still more desirous of tarrying here for the night; but the orders were peremptory which had been given to our people to push forward without delay.

To the south the ground stretched uniformly for ten miles in sandy plains bare of grass, pleasantly broken at intervals by bushy shrubs and single trees. Onwards we went for five hours of the night over moonlit sands, the imagination giving a weird aspect to all around. The region strongly reminded me of the acacia-woods of Taka and Gedaref in South Nubia, which are seen in crossing the forests at the foot of the Abyssinian highlands. The character of the vegetation approximates to that of Kordofan. The commonest trees are the Seyal-acacia, hegelig, tamarind, Christ's thorn, capparis, and that remarkable thorn, the randia, the branches of which serve as models for the pointed lances which the inhabitants of Central Africa employ. One of the trees of Southern Kordofan finds here its southern limit: this is the *Albizzia sericocephala*, a tree of moderate size, of which the finely-articulated, mimosa-like leaf consists of from 5000 to 6000 particles; the thick clusters of blossom gleamed out from the obscurity like snow, and the air was laden with their balmy fragrance. Thus we wandered on as through a cultivated garden, our path as smooth as if we were on gravelled walks. Reaching at length a considerable village, we encamped on the deserted site of a large cattle-park. A sudden storm of rain put

the caravan into a commotion, and forced me to retire with my bedding into one of the wretched huts, which are not really dwellings, but are used for the nightly shelter of the cow-herds. Imbedded a foot deep in fine white ashes, and enveloped in a cloud of dust, I passed the remainder of the night, alternate coughing and sneezing making all sleep simply impossible.

On the following day we had to march for five hours without a draught of water, until a hospitable asylum was opened to us in a village of Take. We were now in the district of the Rek, a locality which formerly made a hitch in the traffic with the natives, before Petherick broke a way to the south through the Dyoor and Bongo, and opened a trade with the Niam-niam.

This Take was an old friend and ally of the Khartoomers, and had attired himself in honour of the occasion in a figured calico shirt, without regard to the prejudices of his countrymen, who despise all clothing as effeminate. Near this village in 1858 there existed a temporary establishment from in which the brothers Poncet started on their elephant hunts the Dinka territory. They called the place Mirakok, but Mirakok and its elephants are now alike unknown in this land of the past, where (transient as a shower or a tide) all the lives and deeds of men have been long forgotten. It has been a land without chalk or stone, so that no permanent buildings could be constructed; it has consequently only reared a people which have been without chiefs, without traditions, without history. Detached fan-palms (*Borassus*), 100 feet high, in default of anything more lasting, mark the abode of Take, a shelter which was destined to have its sad associations for the travellers.

Ghattas's standard-bearer, a most courageous fellow and the best shot among all our Nubians, killed himself on a hunting excursion, which he had undertaken with me and my servant. I had contented myself with bagging a lot of

remarkably plump wild pigeons, but he was resolved to get at some guinea-fowl; for this purpose he made his way into a thicket, where, as he was loading his piece, it accidentally went off, the charge entering his breast. This accident befell the one who was supposed to be incomparably the most skilful of our party in handling his weapons, and it may be imagined what was to be expected of the rest. Blundering accidents and wounds were of perpetual occurrence, so that I should only weary the reader by recounting them. The traveller who has to march with these so-called soldiers must be content to know that he could not anywhere more thoroughly be exposed to the danger of being killed by a chance shot; and I do not exaggerate the truth when I affirm that my life was over and over again seriously threatened.

The unfortunate Soliman, who was thus the victim of his own mischance, was the man who had saved my servant Mohammed when he had his encounter with the wild buffalo. Half the camp hastened to the ill-fated spot, to be enabled to testify to the accidental death of Soliman by his own hand. So quietly had he fallen that even my servant Osman, who was near, ascertained quite casually that he was dead; a dark mark, caused by the smoke from the powder, at the orifice of the gaping wound, showed that his gun had gone off while he was holding it. Sobbing and weeping, his friends and countrymen stood round his body, and even the stony-hearted cattle-stealers seemed as if, after all, they were not utterly devoid of all human emotion. One of them was touched with a strange remorse, the reason of which I afterwards discovered. It appeared that Soliman owed him a debt, which he declared he had paid; on the previous day, while Soliman had been emphatically persisting that the debt was discharged, his accuser, in his rage, cursed him with the heaviest imprecation he could command: "The dogs devour thee!" The disaster, there-

fore, was a manifest punishment from heaven; the man would indeed gladly have never uttered the curse, but yet he could not be reconciled with the dead. On the very next day, as we were about to start, another man shattered the upper part of his arm by carelessly taking his gun from a bush where he had laid it.

We left the unlucky spot, and proceeded two miles further to the village of Kudy, also an old friend of the Turks, as the Khartoomers are everywhere termed by the natives. Here we made another halt, in order to pass the day in slaughtering some cattle, in feasting on beef and goat's flesh, and in laying in a store of corn for our large party of bearers.

Here also a kind of affidavit or protocol, strictly conformable to Mohammedan rule, was taken of the previous day's accident, in order to be able to produce legal evidence at Khartoom, where the deceased Soliman had left a wife and child. The chief part of this important business was performed by the Faki, who accompanied the party as private slave-dealers, enacting at the same time their legal character as scribes. After the protocol was drawn up, it was sealed, according to Oriental custom, by the agents who were present. This was not done without great prolixity and circumstantial debate. The formality of the document was curious; its opening words were: "Osman the agent asks Osman the servant of the lord Musyu the question: Where is Soliman?" Osman in his turn had to give an account of the accident: "As we were hunting in the thicket, I heard a shot," and so on. They did not expect to be cross-examined; they did not look for even such mild reproach as the king gave Hamlet when he inquired, "Where's Polonius?" but they considered it quite as well to keep up the old-established form.

With Kudy I found a good opportunity of prosecuting my study of the Dinka, which I had already taken up in earnest

during my stay in the Meshera. My relations with this strange pastoral people were, throughout the two years which I spent in the interior, but rarely discontinued. Dinka were my cow-herds, and Dinka provided me with all the requirements of my *cuisine* as long as I stayed in Ghattas's Seriba; and even in the remotest limits of my wanderings I had dealings with them. I am only acquainted with the western branch of this people, whose territory altogether extends over an area of from 60,000 to 70,000 square miles, of which the length is close upon 400 miles; my knowledge, however, is accurate enough to enable me from my own observation to add much that is new to the descriptions which previous travellers have given of this people.

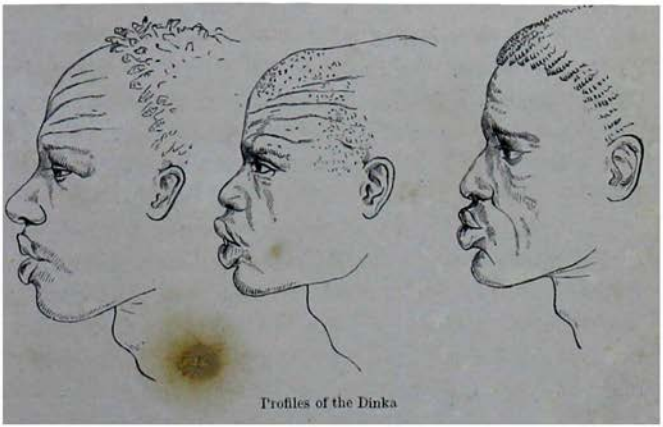
Although individual tribes of the Dinka, with regard to height and bodily size, stand pre-eminent in the scale of the human race, the majority of this western branch of the nation rarely exceeds a middle height. Of twenty-six representatives that were measured, the average height was about 5 ft. 7 in. According to this, the average size of the Dinka is inferior to that of the Kaffirs, but it exceeds that of Englishmen.

In their figure they are like the *swamp-men*, if such an expression may be allowed, presenting the same lankiness of limb which has been already noticed as characteristic of the Shillooks and Nueir. The upper part of the body appears shorter than among the less swarthy and more robust races who inhabit the rocky hills of the interior. The outline of their sinewy frame is very decidedly marked in the horizontal, angular shoulders; a long neck, slightly contracted at the base, corresponds with the head, which also gradually contracts towards the top and back, and which is generally somewhat flat and narrow. Ordinarily there is a strongly developed width of jaw. Altogether there is a general harmony pervading the whole figure, and the scientific student will hardly fail to recognise the evidence that nature has

pursued a definite end in the development which here exists. The Dinka must be reckoned amongst the darkest of races, but the deep black of their complexion gives place to a manifest tint of brown when the ashes are washed off with which they delight in rubbing themselves. When they have smeared themselves with oil, or taken a bath, their skin shines like dark bronze. The dull polish of chocolate may be taken as descriptive of the brighter hue; this, however, is seldom seen even when the ashes are cleared away, because the removal of the dead scales of cuticle, which then takes place, is followed by a greyish tint which spreads over the skin.

The blue tinge which has been attributed to the negro's skin is entirely a matter of imagination; it may be confidently asserted to be solely the reflection of the sky. This result of reflection is especially to be observed when we chance to see one of these swarthy fellows standing at the aperture of his gloomy hut, which gets no light but what enters by the door.

Any apparent uniformity of physiognomy is all an illusion: it originates more in the inexperience of the eye than in any positive resemblance of feature. The three profiles of which



Profiles of the Dinka

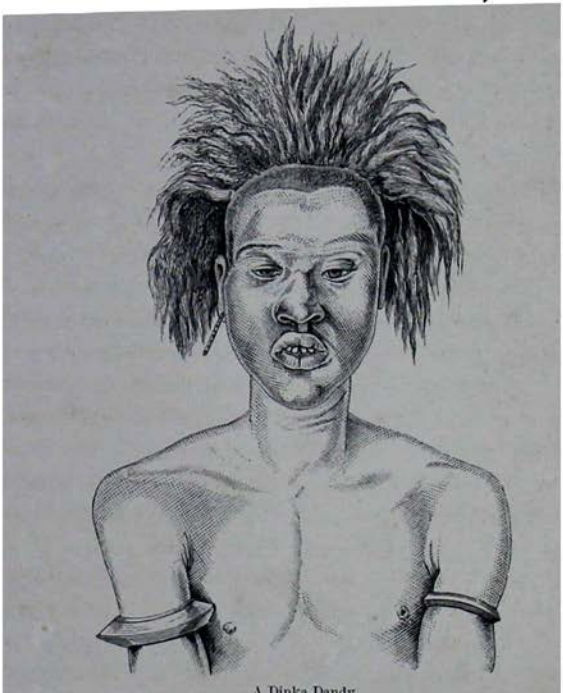
illustrations are given show a marked variety in form between nose and nose. Generally, however, according to our conventional æsthetic notions, the men are more comely than the women of the same age. Pleasant, not to say ordinarily human features, are rare: hideous contortions, increased by the grimaces to which the short eyebrows contribute by reducing the shallow foreheads to a mere nothing, give the majority an expression scarcely better than a baboon's. Still there are exceptions, and with regard to these it must at times be owned that they present a regularity of feature with which no fault could be found.

The hair of the Dinka is nearly always very meagre; it is generally closely shorn, except at the crown, where a tuft is left, which they ornament with ostrich feathers, in imitation of a heron. The helmet-shaped combs of the Shillooks are never seen, but tufts of woolly locks are much in fashion. Occasionally, but not often, the hair is plaited in fine braids, which run in parallel lines across the head. The women wear their hair either closely shaven or as short as possible.

The accompanying portrait represents what might be styled a Dinka dandy, distinguished for unusually long hair. He must be classed as belonging to that finer-formed race which has been mentioned. By continual combing and stroking with hair-pins, the hair of the negro loses much of its close curliness. Such was the case here: the hair, six inches long, was trained up into points like tongues of flame, and these, standing stiffly up all round his head, gave the man a fiendish look, which was still further increased by its being dyed a foxy red.

This tint is the result of continual washing with cow-urine; a similar effect can be produced by the application for a fortnight of a mixture of dung and ashes. The beard never attains sufficient growth to be worth their attention. Their razors are of the most primitive description, consisting simply of carefully ground lance-tips.

Both sexes break off the lower incisor teeth, a custom which they practise in common with the majority of the natives of the district of the Bahr-el-Ghazal. The object of this hideous mutilation is hard to determine; its effect ap-



A Dinka Dandy.

pears in their inarticulate language, of which I suppose we could not imitate the sound, unless we submitted to the same ordeal. Some Africans file their incisor teeth to a point; others, like the Batoka of the Upper Zambesi, break out those of the upper jaw. The former of these practices appears comprehensible as increasing their capability for defence in single combat; and the latter is perhaps an imitation of their deified ruminants; but the reason why the Dinka should absolutely disfigure their lower jaw is quite beyond my

comprehension. The African races have commonly been reported as distinguished for their fine rows of teeth, and it was accordingly a matter of surprise that bad teeth were so often conspicuous. The aged on this account are little short of disgusting, for the upper teeth, from the deficiency of opposition from the lower, project far from the mouth and stick out like a finger-joint. So marked is this peculiarity that some of the people have acquired from the Nubians the *soubriquet* of Abu-Senoon, father jut-tooth.

Men and women alike pierce their ears in several places, and insert iron rings or little bars with iron tips. The women also bore the upper lip and fit in an iron pin, running through a bead, a custom which is common among the Nueir. Tattooing is only practised by the men, and always consists of about ten radiating strokes, which traverse forehead and temples, having for their centre the glabella, or base of the nose: it is a symbol by which the Dinka are recognised at once.

The observation of Barth,* that many heathen tribes consider clothing more necessary for men than for women is not applicable to the Dinka or any of the natives of the river plains. According to Dinka notions of propriety, it is becoming for none but women to wear any covering; any attire, even of the most moderate description, is considered unworthy of the men. The Nubians, who are always called Turks, do not certainly belong to the most carefully clothed of the human race, yet the Dinka always term them *women*, a designation which in this sense is quite common. I always appeared in a complete suit of clothes, and my apparel accordingly gained for me the ironical title of the "Turkish lady."

On the other hand the women here are scrupulously clothed with two aprons of untanned skin, which reach before

* Barth, vol. ii. p. 475.

and behind from the hips to the ankles, and are trimmed round the edges with rows of beads, small iron rings, and little bells. At that time, white beads, as large as peas, with blue spots, called "Genetot ahdah" in the Khartoom market, and others an inch in diameter, called "Barrad" or hail-stones, which were principally worn by the men as necklaces, were all the rage, every other description being contemptuously rejected. In the course of a few years the fashions in beads change, and the store-houses in the Seribas of the Khartoomers get overstocked with supplies that are old-fashioned, and are consequently worthless.

The Dinka live in a veritable iron age—that is to say, they live in an age in which iron has still a high value; copper is not esteemed of corresponding importance. The wives of some of the wealthy are often laden with iron to such a degree that, without exaggeration, I may affirm, that I have seen several carrying about with them close upon half a hundredweight of these savage ornaments. The heavy rings with which the women load their wrists and ankles, clank and resound like the fetters of slaves. Free from any other domination, it is remarkable of this people how, nevertheless, they are not free from the fetters of fashion. The favourite ornaments of the men are massive ivory rings, which they wear round the upper part of the arm; the rich adorn themselves from elbows to wrists with a whole series of rings, close together so as to touch. An adornment for the neck of less distinguished character is formed of strings of plaited leather; the bracelets are cut out of hippopotamus hide; and the tails of cows and goats, in which every Dinka exquisite arrays himself, and with which he trims his weapons, are in common use.

Since the Dinka cannot do much with his miserable crop of hair, he turns his attention to caps and perukes in a way not unfrequent among Africans. Whilst I was with Kudy I often saw those strange specimens of head-gear which, in the shape

of a Circassian chain-helmet, are formed exclusively of large white bugle-beads, which in Khartoom are called "muria." This decoration is especially common amongst the Nueir.* Another kind of head-dress is composed of ostrich feathers, and forms a light and effectual protection from the sun.

According to the custom, which seems to belong to all Africa, as a sign of grief the Dinka wear a cord round the neck; but amongst other nations we shall have occasion to notice several additional tokens to denote the loss of a member of a family.

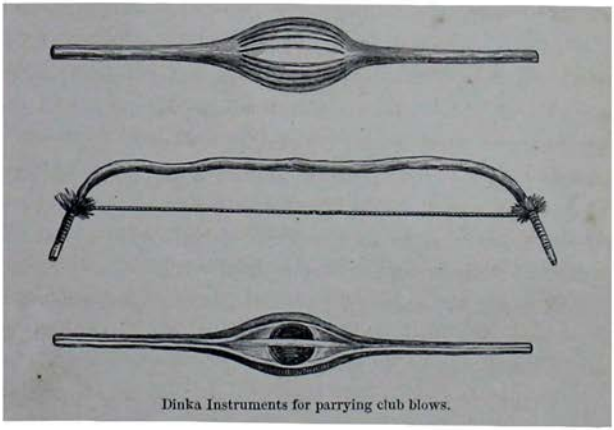
Since the western territories of the Dinka in the alluvial flats nowhere produce any iron, their modes of manipulation of this metal are not so highly developed as among some other tribes which will subsequently come under our observation. Before the appearance of the Khartoomers, the Dyoor, who had settled within the limits of the Bongo and Dinka, in the vicinity of the soil which produced iron-ore, had performed all the smith's work which was required by the Dinka. At that time these Dyoor seem to have been brought by the Dinka to a similar state of vassalage as that in which they themselves now stand to the Nubians. The Bongo, although their land produces iron, were far too hostile to their neighbours to furnish them with a supply of iron in the way of commerce. The Dinka themselves, being exclusively occupied with their cattle-breeding, have no taste and find little time for any arduous work of the smithy; hence it happens that although their iron ornaments are numerous, the workmanship of them all is of the most primitive character.

The most important weapon of the Dinka is the lance. Bows and arrows are unknown: the instruments that some travellers have mistaken for bows are only weapons of defence for parrying the blows of clubs. But really their favourite

* In Wood's 'Natural History of Man,' p. 522, there is an accurate illustration of these ornaments.

weapons are clubs and sticks, which they cut out of the hard wood of the Hegelig (*Balanites*), or from the native ebony (*Diospyrus mespiliformis*). This mode of defence is ridiculed by other nations, and the Niam-niam, with whom the Dinka have become acquainted by accompanying the Khartoomers in their ivory expeditions, deride them as "A-Tagbondo," or stick-people.

Similar conditions of life in different regions, even among dissimilar races, ever produce similar habits and tendencies. This is manifest in the numerous customs which the Dinka possess in common with the far-off Kaffirs. They have the same predilection for clubs and sticks, and use a shield of the same long oval form, cut out of buffalo hide, and which, in order to insure a firmer hold, is crossed by a stick, secured by being passed through slits cut in the thick leather. But the instruments for parrying club-blows depicted in the accompanying illustration are quite peculiar to the Dinka.



Dinka Instruments for parrying club blows.

As far as I know, no previous traveller has drawn attention to these strange contrivances for defence. They are of two kinds. One consists of a neatly-carved piece of wood, rather more than a yard long, with a hollow in the centre for the

protection of the hand: these are called "quayre." The other, which has been mistaken for a bow, is termed "dang," of which the substantial fibres seem peculiarly fitted for breaking the violence of any blow.

Everywhere, beyond a question, domestic cleanliness and care in the preparation of food are signs of a higher grade of external culture, and answer to a certain degree of intellectual superiority. I have travelled much in Europe, where the diversity of the external conditions of life is greater than in any other quarter of the world; I have had much opportunity of observation, and I am sure that I do not err in the conclusion that I draw. Not the size of the houses, nor the dimensions of the windows (for these are variously influenced by climate), not the clothing (for Sards, Dalmatians, and Albanians, incontestably the least civilised of Europeans, are the most magnificently attired of all), but cleanliness and choice of food not only at once disclose a real distinction between nation and nation, but constitute a measure of the degrees of civilisation in individual provinces and districts. Now both these qualities, I aver, are found among the Dinka to a greater extent than elsewhere in Africa. First, as to the food.

In culinary matters the Dinka are certainly superior to the Nubians, and I should have little hesitation in pronouncing them even more expert than either the Arabs or the Egyptians. Their farinaceous and milk foods are in no way inferior to the most refined products of an European *cuisine*. The reaping, threshing, and sifting of the sorghum and penicillaria grain (the durra and dokhn of the Arabs) are brought to perfection by their female slaves, who subsequently granulate the meal like sago. In seasons of scarcity their talent for cooking has led them to the discovery of various novelties in the way of food. Like the tribes of Baghirmi, the Musgoo, and Adamawa, they make a preparation, very much in the Indian fashion, from the

farinaceous germs of the Borassus palm. They extract all its native bitterness by soaking and washing, and succeed in producing a fine meal, which is purely white. The substance procured from these germinating seeds has a look very similar to the root of the Florentine iris. They treat the tubers of the Nymphæa in very much the same way, and render them quite edible.

With the choice cookery corresponds also the decorum of their behaviour at meals. They certainly, in this point, more resemble ourselves than any Orientals. They do not all dip their hands at once into the same dish, like the Turks and Arabs, but assist themselves singly. A large dish of cooked farina is placed upon the ground, around which the guests recline, each with his gourd-shell of milk, or, better still, of butter, at his side; the first pours his milk only on the part which he touches, and when he has taken enough, he passes the dish to the next, and thus they eat in succession, but quite separately. The Dinka repudiate the Oriental superstition that envious looks can turn the food to poison, and have no fear of the "evil eye."

At times it greatly amused me to entertain Dinka ladies of rank in my tent, in order to pay them the compliment of my admiration of their perfection in the arts of cookery. On my folding table I laid out for them some European dishes, and they sat on my chairs. I was astonished at the readiness with which they fell into our mode of serving, for they handled our spoons and forks as if they were perfectly accustomed to them; but they nearly always carefully washed everything they had used, and returned it to its place.

In the interior of their dwellings, the Dinka are as clean as the Shillooks, sharing the same partiality for ashes as a bed. It ought to be mentioned that the traveller in this part of Africa is rarely troubled with vermin or fleas, which everywhere else, like desolation and slavery, seem invariably

to have followed the track of Islam. In the Western Soudan the torments of the night are represented as insupportable, so that the huts of the Hottentots are not worse. Among the Dinka it is entirely different. The only disquietude to a stranger in their houses arises from the snakes, which rustle in the straw roofs, and disturb his rest. Snakes are the only creatures to which either Dinka or Shillooks pay any sort of reverence. The Dinka call them their "brethren," and look upon their slaughter as a crime. I was informed by witnesses which I had no cause to distrust, that the separate snakes are individually known to the householder, who calls them by name, and treats them as domestic animals. Their abundance here seemed to me very remarkable. Among the Bongo, on the other hand, I spent six months before I saw a single specimen, and it appears to be an established fact that, upon the whole, they are not generally common in Tropical Africa. Perhaps the species which is most frequent is the giant python (*Sebæ*). Those which inhabit the Dinka huts are, as far as I could learn, not venomous; and, as evidence that they are harmless, I cite the scientific names of the three species: *Psammophis punctatus*, *Ps. sibilans*, and *Ahaetuella irregularis*.

The Dinka are far more particular than any other tribe in the choice of their animal food. There are many creeping things, which are not rejected by the Bongo and Niam-niam, which they loathe with the utmost disgust. Crocodiles, iguanas, frogs, crabs, and mice they never touch; but, connoisseurs of what is good, they use turtles for making soup. It is scarcely necessary to say that the accounts of the cannibalism of the Niam-niam excite as much horror amongst them as amongst ourselves. Nothing, likewise, is more repulsive to them than dog's flesh, which is enjoyed by the Mittoo—a fact which justifies us in the supposition that that tribe is addicted to cannibalism. Dinka, as well as Bongo, have declared to me in the most decided manner, that they

would rather die of hunger than eat the flesh of a dog. But a delicious morsel to the Dinka is the wild cat of the steppes, which is often found in this part of Africa, and is the origin of our domestic cat, to which it bears no slight resemblance. But more delicious than all they esteem the hare; and in order to illustrate their appreciation of it, a Dinka, to whom I was talking, naïvely asked me whether I knew what a Dinka did when he managed to kill a hare on the steppe by a lucky blow of his club? "He makes a fire," he added, "and roasts his game and eats it quietly, without saying anything about it at home."

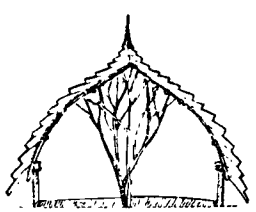
Even before they had any intercourse with Mohammedan countries, a love of tobacco-smoking had been one of the traits of the Dinka, who use the same huge pipe-bowls as we have already observed amongst the Shillooks. A strong stem opens into a small calabash, which serves as a mouth-piece, and is filled with fine bast, to intercept the narcotic oils. Denarcotinizing, as it is termed, is quite an old African invention. Here, where tobacco does not grow at all plentifully, the process answers a double purpose, for, by taking off the top of the pipe, the bast can be removed, and, impregnated as it is with tobacco oil, it is subsequently chewed. The smoking apparatus is so ponderous that every one is obliged to sit down while he smokes.

The Dinka dwellings consist of small groups of huts clustered in farmsteads over the cultivated plains. Villages in a proper sense there are none; but the cattle of separate districts are united in a large park, which the Khartoomers call a "murah."* The accompanying drawing represents a Dinka farm surrounded by sorghum fields. Of the three huts, the one in the centre, with a double porchway, is set apart for the head of the family; that on the left is for the

* The derivation of "murah" would seem to be from "rah," rest, 'merah," a resting-place for cows, or "menah," a resting-place for camels.

women; whilst the largest and most imposing hut on the right is a hospital for sick cows, which require to be separated from the throngs in the murah that they may receive proper attention. Under an awning in the centre of the huts is the fireplace for the cooking, sheltered from the wind by a semi-circular screen of clay. The goats are kept within a small thorn fence, so that the daily supply of milk may be always at hand.

As a rule the huts of the Dinka are spacious, and more durable than those of other tribes who build their dwellings in the same conical form. They are not unfrequently 40 feet in diameter; their foundations are composed of a mixture of clay and chopped straw, and the supports of the roof are made of branches of acacia and other hard woods. Not content with supporting these with a single central prop, the Dinka erect a trunk with its spreading branches in the middle. The roof is contrived out of layers of cut straw. These buildings endure for eight or ten years, and decay at length mainly through being worm-eaten. The huts of the Bongo, on the contrary, are built up much more rapidly, but rarely last as much as three years.

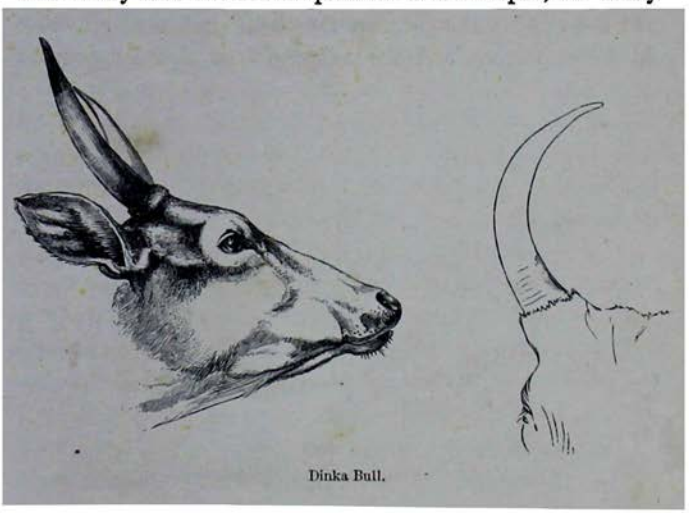


Sectional View, showing construction of Dinka Hut.

The principal plants that are here cultivated are sorghum and penicillaria, three kinds of beans, earth-nuts (*Arachis*), earth-peas (*Voandzeia subterranea*), sesame, yams, and Virginian tobacco; but we shall have a more ample opportunity of entering into the details of these crops when we speak of the Bongo, who cultivate nearly the same products of the soil.

The domestic animals are oxen, sheep, goats, and dogs; poultry was never to be seen, and the cause of its absence is inexplicable. The cattle belong to the Zebu race, and are

smaller than those of the Baggara and Hassanieh; they have a hump, their horns are slender, the fore part of the body prevailing so in size as to resemble an antelope. As to colour, the majority are nearly white, but it would be incorrect to say that either the speckled or the striped, the tawny



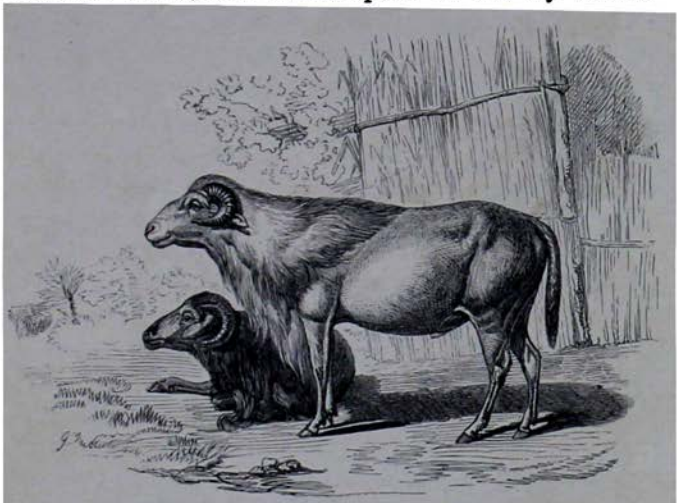
Dinka Bull.

or the brown, are wanting. The Dinka have separate expressions to denote every shade of colour of the breed, and, indeed, their vocabulary for all that relates to cattle and cattle-breeding is more copious than that of any European tongue.

The sheep are of a peculiar breed, which is unique amongst the Dinka, Nueir, and Shillooks; farther on in the interior of the equatorial districts it is not known. Its chief characteristic consists of a shaggy appendage to the shoulders, breast, and neck, like a mane, whilst on the rest of the body, and on the meagre tail, the hair is quite short. This mantle of hair gives them an appearance like diminutive buffaloes, whilst their plump bodies and short legs increase the resemblance. Generally white, they are occasionally brown or

spotted, and in some rare cases I have seen them of quite a reddish hue.* Like the pastoral people of Southern Africa, the Dinka have acquired the art of splitting the horns in their early growth, so as to increase their number at will.

The continual dampness of the pasture, especially throughout the rainy season, favours the development of revolting intestinal vermes, and the rain-pools in the dry months



Dinka Sheep.

become most prolific as breeding-places for Cercariæ. I have frequently seen sheep suffering under disease, their ailment arising from their liver and gall-ducts being choked up by these worms. The distoma, which is a denizen of every zone and extends even to Greenland, is found here an inch long.

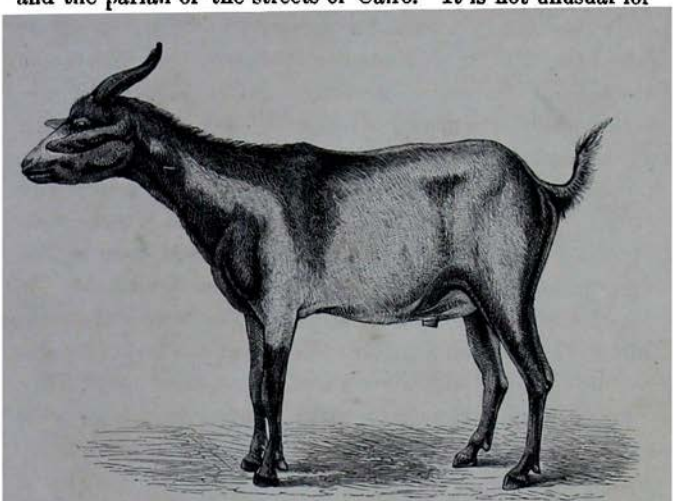
The race of goats bred by the Dinka does not differ materially from the Ethiopian form, which we have already noticed † among the Bedouins of Nubia; 'its only distinc-

* The illustration gives a likeness of a Dinka sheep, which must not, however, be confounded with the maned sheep of Morocco.

† Vide Chap. I., p. 33.

tion is being somewhat larger; in appearance it is always meagre, and its prevailing colour is that of a young grey colt, occasionally inclining to a dark iron-grey.

The dogs closely resemble the common village curs of Nubia, a cross between the greyhound of the Nubian steppes and the pariah of the streets of Cairo. It is not unusual for



Dinka Goat.

their colour to be brown, but by far the larger number are a tawny yellow.

Every idea and thought of the Dinka is how to acquire and maintain cattle: a kind of reverence would seem to be paid to them; even their offal is considered of high importance; the dung, which is burnt to ashes for sleeping in and for smearing their persons, and the urine, which is used for washing and as a substitute for salt, are their daily requisites. It must be owned that it is hard to reconcile this latter usage with our ideas of cleanliness. A cow is never slaughtered, but when sick it is segregated from the rest, and carefully tended in the large huts built for the purpose. Only those that die

naturally or by an accident are used as food. All this, which exists amongst most of the pastoral tribes of Africa, may perchance appear to be a lingering remnant of an exploded cattle-worship; but I may draw attention to the fact that the Dinka are by no means disinclined to partake of any feast of their flesh, provided that the slaughtered animal was not their own property. It is thus more the delight of actual possession, than any superstitious estimate, that makes the cow to them an object of reverence. Indescribable is the grief when either death or rapine has robbed a Dinka of his cattle. He is prepared to redeem their loss by the heaviest sacrifices, for they are dearer to him than wife or child. A dead cow is not, however, wantonly buried; the negro is not sentimental enough for that; such an occurrence is soon bruited abroad, and the neighbours institute a carousal, which is quite an epoch in their monotonous life. The bereaved owner himself is, however, too much afflicted at the loss to be able to touch a morsel of the carcase of his departed beast. Not unfrequently in their sorrow the Dinka remain for days silent and abstracted, as though their trouble were too heavy for them to bear.

The only domestic animal which is slaughtered amongst them is the goat, which scarcely represents the thirtieth part of the value of a cow. A heifer has three times the value, and a cow that has calved double the value of a steer. In common with the other tribes of this part of Africa they use rather a singular method of butchering their cattle, proceeding, whenever it is practicable, by the way of making a violent stab in the nape of the neck by means of a spear. This causes immediate death, and is a method which gives but little trouble.

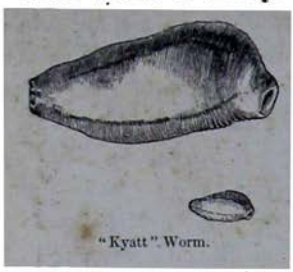
It is not difficult to understand how people like the Dinka should make their whole delight to centre in having thriving cattle-farms, but to us their profitless practice of emasculation must remain incomprehensible. The herdsmen cut their

bulls and bucks with the mere intention of feasting their eyes upon a development of fat which is always obnoxious to the stomach. Almost the third part of their bulls are submitted to the knife, and the same proportion of their goats and rams, and even their dogs, with the design of rendering them more agile, more enduring, and fitter for the chase; this also being the reason why their ears and tails are clipped. Ask the Dinka what good they get from their possessions of oxen, and they have ever the answer ready that it is quite enough if they get fat and look nice. Such is the way in which they express their satisfaction and their pride.

The failure of the beard amongst the male cattle so treated is a topic that suggests some observations. In spite of the anxiety and care which the Dinka bestow upon their herds, there is no mistake about the degeneration of the race. The way in which I chiefly account for this is that there is not enough crossing of breeds—in fact, that there is almost a total exclusion of any strange stock. I should say that hardly one in a hundred of the beasts is capable of either bearing a burden or going a journey, a purpose, however, to which none of the negroes of the Upper Nile ever seem to put them. But nothing is more remarkable than the entire absence of fat which characterises them; a single pound of fat could not be obtained from a whole ox; and not only does this deficiency extend to the parts that are ordinarily plump and fleshy, but the spinal marrow itself is so utterly dry that in a stewpan it runs off like white of egg, without depositing a particle of grease. Eye-witnesses have assured me that Miss Tinné, during her residence here, although she had whole herds at her command, could never get her supply of pomade replenished.

Again the cattle of the Dinka are not provided with salt in any form whatever, which may in a measure account for the degenerating; it may explain the prevalence, all but universal, of the worms known as "kyatt," which cover

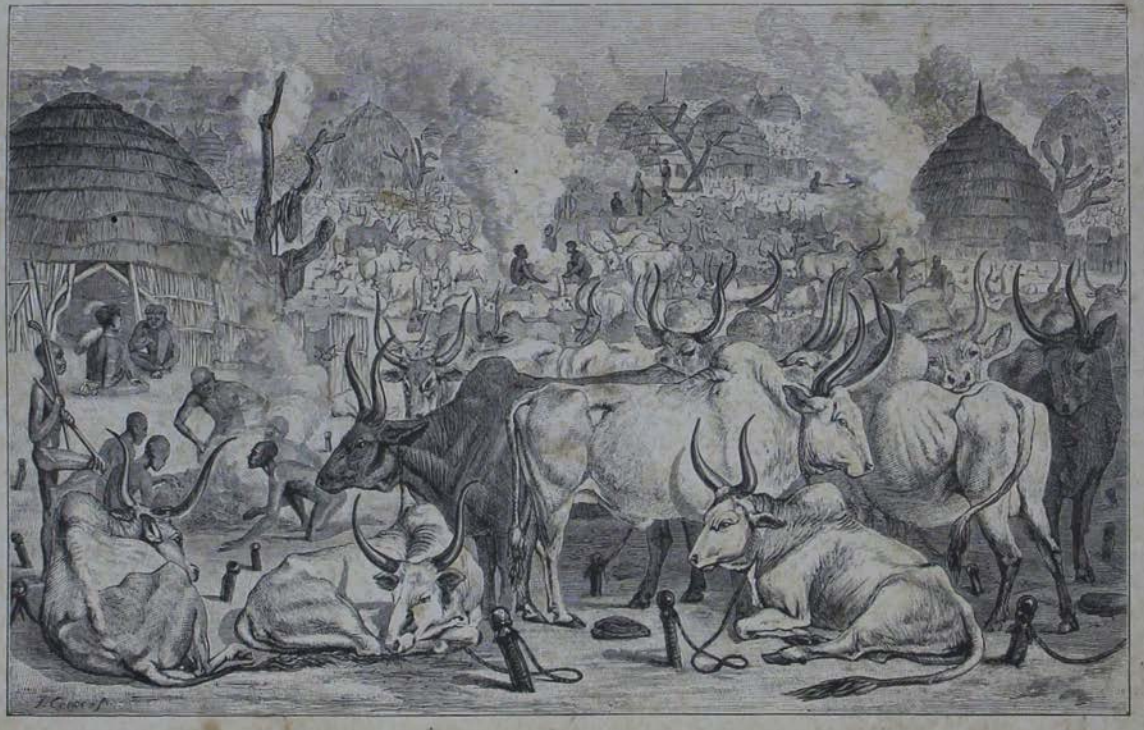
the first stomach or paunch, of nearly all their cattle. These worms in Europe are included in the genus of the Amphistoma; they are like an oval bag, something under half an inch long, and generally as red as port wine.


"Kyatt" Worm.

The sheep and he-goats that are left are quite devoid of fat; their flesh when it is cooked has an odious soapy flavour, and is altogether more repulsive than the rankest roast antelope.

As an illustration of the degree to which the Dinka devote all their attention to cattle-breeding, and find their chief delight in it, it may be mentioned that the great amusement of the children is to mould goats and bullocks out of clay. Travellers have related the same fact about the children of the Makololo; and, for my part, I could not help having a kind of satisfaction when I saw these first efforts at sculpture in a land where there are no pictures and no images of deities.

The accompanying illustration is designed to exhibit something of the daily routine of the Dinka. It represents one of those murahs or cattle-parks, of which I have seen hundreds. It depicts the scene at about five o'clock in the afternoon. In the foreground there are specimens of the cattle of the country. The men in charge are busied in collecting up into heaps the dung that has been exposed during the day to be dried in the sun. Clouds of reeking vapour fill the murah throughout the night and drive away the pestiferous insects. The herds have just been driven to their quarters, and each animal is fastened by a leather collar to its own wooden peg. Towards the left, on a pile of ashes, sit the owners of this section of the murah. The ashes which are produced in the course of a year raise the level of the entire estate. Semi-circular huts erected on the hillocks afford the owners temporary accommodation when they quit their homes some



I. DINKA CATTLE-PARK. *p.* 168.

miles away and come to feast their eyes upon the goodly spectacle of their wealth.

The milking is performed in the morning hours. Truly miserable is the yield, and the most prolific of the cows does not give as much as one of our ordinary goats. This deficiency of milk is another witness of the deterioration of the breed, and no one would believe the quantity of milk it takes to produce a single pound of butter. The dew hardly goes off before ten o'clock, and it is not until that hour that the herds are driven out. It is quite rare for a murah to hold less than 2000 beasts, and some, as I have mentioned, are capable of holding 10,000. Upon an average I should reckon that for every head of the population there would be found at least three of cattle; of course, there is no lack of the poor and the destitute, and these obviously are the slaves and dependents of the rich. So large are the numbers of the Dinka, and so extensive their territory, that it must be expected that they will long perpetuate their existence amongst the promiscuous inhabitants of Africa. So far as regards their race, their line of life, and their customs, they have all the material of national unity; but where they fail is that their tribes not only make war upon each other, but submit to be enlisted as the instruments of treachery by intruders from outside. That the Khartoomers have not been able hitherto to make good their footing upon Dinka soil is due more to a general resistance to external control than to any internal condition of concord. Every attempt to bring this people into subjection has been quite a failure, and not at all the easy matter it proved with the Bongo and some other communities. The southern people are emphatically agricultural, for the most part devoted to peaceful pursuits, and so they are wanting in that kind of organisation which could unite them into a formidable body for mutual resistance. The marked peculiarity of the Dinka, as well as their adherence to all their wonted habits, renders them thoroughly useless as far

as regards the slave traffic. Although the people of Khartoom for fifteen years or more have traversed their country, they have never been able in any way to make use of the material which might be afforded by a regulated commercial intercourse.

The Bongo and the Niam-niam are alike greedy of bits of clothing, but the Dinka are utterly indifferent to anything of the sort. The women, on account of their proficiency in housekeeping, play a large part in the Khartoom slave-trade, but they give their masters infinitely more trouble than the slaves of any other race. The men that were captured, in days now gone by, were one and all converted into soldiers by the Government, and, even to this date, so large a majority of the dark-skinned troops of Egypt consists of men of the Dinka, that their well-formed persons, their tall stature, and their innate courage, would be missed very considerably from the ranks. Adam Pasha, who at the time of my visit had the military command in the Soudan, was himself a Dinka by birth.

I must be allowed to pass lightly over, as an equivocal topic, the religion of a people whose dialect I was unable adequately to master. It seems to me like a desert of mirages, or as a playground, where the children of fancy enjoy their sport. The creed of the Dinka apparently centres itself upon the institution to which they give the name of the Cogyoor, and which embraces a society of necromancers and jugglers by profession. Other travellers have recorded a variety of marvels about their sleight of hand, their ventriloquism, their conjurations, and their familiarity with the ghosts of the dead; but of these I shall defer all I have to say till I come by-and-by to speak generally about casting out devils.

Before we leave the Dinka we must not omit to recall their virtues, in order that we may fairly estimate the charge that has been laid against them of cruelty in war. It is affirmed that they are pitiless and unrelenting in fight, that they are never known to give quarter, and revel in wild

dances around the bodies of their slaughtered foes: a whole village will take their share in the orgies which one of the community will start, whenever, either by lance or club, he has prostrated an antagonist. But, for my part, I am ready to certify that there are Dinka whose tenderness and compassion are beyond a question. One of the Bongo related to me, as a matter of his own experience, that he had been severely wounded upon an expedition which the Nubians had set on foot against the Dinka to steal their cattle: he had laid himself down just outside a Dinka's house, and the owner had not simply protected him against all his prosecutors, who considered themselves amply justified in proceeding to every extreme of vengeance, but kept him till he had regained his health: not content with that, he provided him with an escort back, and did not abandon him till he was safe and sound again amongst his own people.

Notwithstanding, then, that certain instances may be alleged which seem to demonstrate that the character of the Dinka is unfeeling, these cases never refer to such as are bound by the ties of kindred. Parents do not desert their children, nor are brothers faithless to brothers, but are ever prompt to render whatever aid is possible. The accusation is quite unjustifiable that family affection, in our sense, is at a low ebb among them. In the spring of 1871, whilst I was staying in the Seriba of Kurshook Ali on the Dyoor, I witnessed a circumstance which I may relate as a singular corroboration of my opinion. A Dinka man, who had been one of the bearers who had carried my stores from the Meshera, was about to return to his own home in the territory of Ghattas, but he had been attacked by the guinea-worm, and his feet were so swollen that it was with the utmost difficulty that he could proceed a step, and he was obliged to remain behind alone. Everything was excessively scarce and dear, and he was glad to subsist on a few handfuls of durra and on what scraps we gave him from our meals;

in this way he dragged on, and, with a little patience, would have been all right: however, he was not suffered to wait long; his father appeared to fetch him. This old man had brought neither cart nor donkey, but he set out and carried away the great strapping fellow, who was six feet high, for a distance of fifteen or sixteen leagues, on his own shoulders. This incident was regarded by the other natives as a mere matter of course.

In what I have said, I have attempted to describe the leading features in the life of the Dinka, being desirous to exhibit such details as may allow a correct judgment to be formed of the true relations which exist between the Khartoomers and this people, who are at once so pastoral and yet so prepared for war.

Here, at the village of Kudy, our caravan had accomplished about half its journey, which was altogether a little over 90 miles. It was on the afternoon of the 28th of March that we started afresh towards Ghattas's Seriba, immediately after the gun accident which I have related. On account of their late liberal diet, our bearers did not advance with their usual alacrity. We proceeded for three hours, and at a well called Pamog, 20 feet deep, we halted for the night.

On the next day our route led through forests, and we entered upon the territory of the Al-Waj. The inhabitants regarded us as enemies, and, seizing their bows and arrows, left their dwellings and, like frightened game, flocked to the adjacent woods. According to our Dinka interpreters, the Al-Waj do not belong to the Dinka race, but form an enclave, or isolated community, of unknown origin. As we entered the wood, for the purpose of botanising, the savages were continually starting up before us, causing no little uneasiness to my companions, who suspected a flight of arrows from every thicket. To say the truth, the natives had been so hardly treated that it could not be expected of them to meet their oppressors very hospitably.

We should have proceeded far more quickly, but that we were under the necessity at every halt to send to a distance all round to procure a fresh supply of corn for our numerous party. This continually caused the delay of several hours, as the farms were often very desolate and ill supplied. The Al-Waj district is an almost unbroken forest in the midst of open flats. Throughout the rainy season it is hardly better than one vast puddle. The vestiges of elephants are frequent at all times; and both right and left were giraffes trotting over the rugged grass and wagging their tall heads. The appearance of giraffes when they are running is very extraordinary, and, as they are seen through the grey twilight of the morning, they have a look half spectral and half grotesque; they seem to nod and bow like figures in the ill-managed drops of a second-class theatre.

After leaving the village of the Al-Waj we proceeded for three leagues through the forest, and found ourselves again on the extensive steppe. At noon on the following day we reached the district of the Dyuihr, a clay flat, devoid of trees. The Khartoomers cannot pronounce the native names correctly, and call this people the Dyeraweel. The large villages were now deserted, the population, on account of the scarcity of water and pasturage, having gone to the river-banks. For two nights we sacrificed our rest and hurried onwards by forced marches. It was just before sunrise that we reached the first rocky irregularity in the soil, a general ascent in the ground being quite perceptible. Bush-forests now took the place of the steppes, which we had long found to be but scantily relieved by thickets. A luxuriant foliage revealed itself, presenting one of those striking *limits of vegetation* which are so rarely to be met with in Africa. From this interesting locality I proceeded for another three leagues, thus accomplishing the preliminary object of my journey. I was in the chief Seriba of Ghattas, which for some months to come I proposed to make my head-quarters.

CHAPTER V.

Reception at the Seriba. Population. Fertility. Salubrity. Management. Poor prospects of the ivory trade. Failure of European firms in Khartoom. Idrees, the chief agent. Domestic arrangements. Beauties of spring. The daughter Seriba Geer. Bit of primeval forest. Giraffe-hunt. Bamboo jungle. Negro festival and music. Trip to the Dyoor and to Wow. Desertion of bearers. Good entertainment. Marquis Antinori and Vayssière. Old servant of Petherick's. Hornblende. Height of the water of the Dyoor. Apostrophe to the river. A model Seriba. First acquaintance with Niam-niam. Trader from Tunis. The Wow River. Seriba Agahd in Wow. Edible fruits of the country. Wild buffaloes. Instability of dwellings. Cuama and Leucotis antelopes. Numerous butterflies. Bear-baboons. Pharaoh palms. Daily life of the Dyoor. Their race. Iron-smelting. Formation of huts. Idyll of village life. Hunting with snares. Women's work. Graves. Care of young and old.

Of the character of the buildings, the arrangements and mode of life in the settlements of the Khartoomers, I had been able from hearsay to form a very imperfect idea. My curiosity was therefore very considerably awakened as our caravan approached the Seriba of Ghattas. Half a league from the place we came to a halt in order to give the customary warning by firing a salute, and without farther delay started afresh. Mounted on a donkey, and surrounded by my attendants, I went at the head of the *cortége*. All round the settlement for some distance the land is entirely cultivated, and the view as we proceeded was only broken by large trees dotted here and there, which in their summer verdure stood out in charming contrast to the cheerless grey of the desert steppe. Soon rising from the plain appeared the tops of the conical huts embracing nearly the whole horizon. I looked in vain for either fortifications, walls,

bastions, or watch-towers, with which I had imagined that a Khartoomer's Seriba must be provided. In fact, there was hardly anything to distinguish it from any of the villages of the Dinka which are scattered over the cultivated flats.

A motley crowd, relieved by many a bright bit of colour, presented itself and formed a lively spectacle such as was scarcely to be expected to break in upon the monotony of an African landscape. We were received with a rattling salute from a number of rusty rifles, and there was every disposition to do the honours of our arrival in a becoming manner. Elegantly attired in an Oriental costume, Ghattas's agent approached with the gestures of welcome, and proceeded to conduct me to the hut which for some weeks already had been prepared for my reception. For the first time I now observed that the area in the centre of the huts was surrounded by a lofty square palisade; through the narrow gateway of this, with lowered banners and amidst the sound of gongs and kettle-drums, our cavalcade passed on.

With this chief Seriba are associated five smaller settlements in the adjoining Bongo country, and four more in remoter spots. It lies on the border-lines of the three races, the Dinka, the Dyoor, and the Bongo. From an insignificant beginning it had, in the course of thirteen years, increased to its present importance. A number of Gellahba, Nubian, and other merchants, had taken up their abode on large estates within its precincts; and here it was that they completed their purchases of slaves in order to carry them on to Darfur and Kordofan. The garrison was composed almost exclusively of natives of Dongola; there were, however, a few Sheigeah and men of Kordofan among them, and these, including the numerous *employés* of Ghattas, made the resident armed force not much under 250 men. To these should be added some hundreds of slaves reserved for the market, or divided as part of their pay amongst the soldiers, and several hundreds more, male and female, who

are in actual service. The aggregate population therefore of this establishment almost equals that of a small town, and amounts to at least 1000 souls.

For two miles round the Seriba the land is partitioned into fields. Enclosed by dense bush forests, of which the trees rarely exceed forty feet in height, this wide expanse is industriously tilled by the natives who have settled in the vicinity, and furnishes the greater part of the annual supply of sorghum necessary for the garrison. Numerous little villages belonging to the three adjoining people are scattered all about, the fertility of the soil, so much above the average of the district, causing the proximity to the settlement to be held in high estimation. The surface-soil above the iron ore has a depth of three to four feet. The extreme productiveness of the luxuriant tropics is well exemplified in these fields, which for thirteen years have undergone continual tillage without once lying fallow and with no other manuring but what is afforded by the uprooted weeds. A like luxuriance is characteristic of the forests, which year after year, from the immediate vicinity, continue to supply the spreading colony with abundance of fuel.

In the rainy season the place is surrounded by pools, which disappear completely during the winter months; parts of the soil in and about the fields become for the time quite marshy, and at intervals large tracts of the lower steppes, for miles together, are little better than swamps. The Seriba is not elevated more than 100 feet above the mean level of the Gazelle, but in spite of everything the climate is far more salubrious and enjoyable than in many districts of the Egyptian Soudan. This may partly be accounted for by the fact that very few domestic animals are kept, so that the air is uninfected by their carcases, whilst the reverse is generally the case in the large market towns of the Soudan. Camels, as I have said, are never seen; horses and mules are only used as signs of special

luxury on the part of the Seriba authorities; the ass alone manages to drag out a precarious existence in the unfavourable climate, and to defy the fate which has hitherto attended

When affairs are prospering, a month's pay for a soldier is five Maria Theresa dollars. One of the great points with the agents is to spare the merchant any outlay of ready money: he therefore, as often as he can, pays the mercenaries in goods, charging them exorbitant prices for any articles obtained from his stores; on the other hand, he makes this up to them in a measure by allowing them a share in the plunder of slaves or of cattle; the soldiers in their turn can dispose of what booty they may get, all negotiations being generally conducted by the regular slave-dealers. It is very seldom that the men are wary enough to keep independent of the agent in their requirements, or are able, even in the course of many years, to lay by in Khartoom any considerable amount of money. The majority are pledged beforehand to continual service; nevertheless not unfrequently they contrive to escape and, without any intimation, join the company of some competitor, who (in the lawless condition of the country) quietly scorns all efforts to reclaim them. Such cases as these inevitably give rise to repeated contentions between the various Seribas. The annual cattle-plunder, moreover, does not nearly suffice either to attract or adequately to repay the hard services of the Nubian soldier, nor does it go far to remunerate the native bearers, who perform all the transport from the Niam-niam countries to the river. All matters of commerce even in these remote regions are ostensibly conducted in a legitimate mercantile way. For the opening of the ivory traffic with the Niam-niam, as well as for the purpose of buying supplies for the people during expeditions which often last six or seven months, huge bars of copper and beads of every description have to be provided. These are dear, on account of the commission which is paid in Alexandria. The bearers, it is true, are subject with the submission of serfs to the authorities at the Seriba; but as an encouragement to them in their work they can claim

a stipulated proportion of the goods, and this in the course of the year constitutes no unimportant addition to the outlay.

Altogether the Upper Nile traffic was carried on at great pecuniary risk, and its prospects were far from favourable. As I saw it, it was dependent for any amount of success upon the plunder which was made alike upon cattle and upon men, and upon the levies of corn and provisions which were exacted from the natives. Without the aid of the Nubian soldiers the expeditions could not be secure. These soldiers only come to escape the rigorousness of the Egyptian Government in their own land; they participate in the profits, and yet without them the monopoly could not be maintained. The Government could avail nothing to protect a legal business; neither could any European enterprise hope, for many successive years, to be able to work a profitable trade.

The few Europeans who ever really opened transactions in these countries did indeed pay their people in hard cash, and refused to have anything to do either with the slave trade or cattle-stealing, limiting their operations exclusively to the purchase of ivory and to elephant-hunting in the districts adjacent to their settlements. Just as might be expected, however, they were soon compelled to withdraw from their undertaking—either because, on the one hand, the stock of ivory in their immediate vicinity was exhausted, or, on the other, because they found that they could not compete with the native firms, who were backed by the illegal means I have mentioned. Since their withdrawal, no new speculator has attempted to follow in their steps; and as year by year the Khartoom trade loses its European representatives, it appears as though, in course of time, the export business will pass out of European hands. Nothing will prevent this, unless some important modifications should occur in the southern provinces of Egypt. Sanguine of

success, Ismail Pasha has projected the formation of a railway to Khartoom; and, considering the general aspect of affairs as I have related them, this great undertaking deserves the unqualified support of all who do not despair of the ultimate victory of right.

A mere slave when at home, Ghattas's plenipotentiary, Idrees, was here an important personage, invested with absolute power, and swaggered about like an autocrat. By birth a negro, he had not on that account less influence over the Nubians than any other official—for it is not according to the law of Islam to allow national enmity to be antagonistic to personal rank. I was received with all the courtesy due to my credentials, and for the first few days found myself literally loaded with presents. Provisions of every sort were placed at my disposal, whilst my people had free board for a month in Idrees's quarters. Two neatly-built huts of moderate size, within the palisade, were prepared for me, but these were not nearly sufficient to accommodate me with all my baggage. The actual Seriba, about 200 paces square, was so crammed with huts, that not a spot could be discovered where it was possible to erect a more spacious residence. Outside the enclosure, where the buildings were more scattered over the fields, I was not permitted to lodge. I was told how it had happened, and was likely to happen again, that the natives skulked about at night and murdered people in their sleep. This statement I was forced, whether I would or not, to accept, and temporarily, at all events, to content myself with my cramped abode, eighteen feet across.

The huts are built of bamboo and straw; the conical roof rests on a kind of basket-work of bamboo, which is daubed inside with clay, in a way that is imitated from the almost petrified erections of the white ants. The pagan negroes lavish far more care upon their huts than the Mohammedan inhabitants of the Soudan, who, although the bamboo grows so abundantly among them, do not succeed in giving their

"tokkuls" nearly so much symmetry. Here they possess the art of erecting roofs which are perfectly water-tight, and which are so light that they do not require heavy posts to hold them together on the walls. The covering for the roof is formed, in the first place upon the ground, with handfuls of stalks laid side by side and knotted together. These are afterwards plaited into long strips, which are then laid one above the other, like the flounces of a lady's dress—a comparison which is further the more appropriate, because the structure of the frame-work is exactly like a hooped petticoat.

I would not allow the walls of the tokkul, in which I generally passed my time, to be cemented with clay, partly because I liked the airiness of the basket-work, and partly because light was necessary for my daily occupations. There seemed to me two other advantages—first, on dry days, my goods would more rapidly recover the effect of the wet to which they had been exposed; and, secondly, I should be less plagued with rats than those who occupied the plastered huts. In stormy weather, it is true, I had to suffer a certain amount of discomfort. To increase my storage-room I contrived some shelves and stands out of bamboo-canes; I had also brought from Khartoom some deal planks, expressly for the manufacture of the tables which were necessary for my botanical pursuits. A traveller who is in possession of bamboos, cow-hide, bladder, and clay, will find himself not very inadequately supplied with representatives of nearly all the building materials of Europe.

My excursions about the neighbourhood soon began, and these, with the arrangement of my daily collections, occupied the greater part of my time. In unfailing good health, I passed the first few weeks in a transport of joy, literally enraptured by the unrivalled loveliness of nature. The early rains had commenced, and were clothing all the park-like scenery, meadows, trees, and shrubs, with the verdure of spring. Emulating the tulips and hyacinths of our own

gardens, sprang up everywhere splendid bulbous plants; whilst amongst the fresh foliage gleamed blossoms of the gayest hue. The April rains are not continuous, but nevertheless, trees and underwood were all in bloom, and the grass was like a lawn for smoothness. In Tropical Africa, after long continuance of rain, the grass may be considered more as a defect than an ornament in the landscape: the obstructions which it interposes to the view of the traveller considerably mar his enjoyment of the scenery; but throughout the period of the early rains its growth is remarkably slow, and it takes some months to attain a height sufficient to conceal the numerous flowering weeds and bulbs which display their blossoms at the same season.

The territory of the Dinka includes nearly the whole low ground, extending right away to the Gazelle. It is a vast plain of dark alluvial clay, of which the uniformity is not broken by a single hill or mass of rock, any tracts of forest being of very limited extent. As they approach the districts of the Bongo and the Dyoor, the Dinka steppes lose much of that park-like aspect which they here present. Indeed, very marked is the contrast in the character of the scenery which appears on entering those districts; for to the very borders of the Dinka reaches that enormous table-land of ferruginous soil which, unbroken except by gentle undulations or by isolated mounds of gneiss, gradually ascends to the Equator. This plain appears to cover the greater part of the centre of the continent, even if it does not extend as far as Benguela and the shores of the Niger. From my own experience, I can certify that the general geological features of the soil, as exhibited as far south as the latitude of 4°, are identical with those which were conspicuous here, where the latitude was between 7° and 8° N.

At the end of a fortnight I made a trip to the south-east, the first of a series of excursions to Ghattas's different Seribas, which lay four or five leagues apart. On this tour I learnt

something of the river Tondy, on which is established the Seriba known as Addai. The river was now at its lowest level, and was flowing north-east in a tolerably rapid current, between precipitous banks fifteen feet in height. In depth it varied from four to seven feet, and it was about thirty feet in breadth; in the rainy season, however, for three miles, the adjacent steppes are covered with its floods, which are always very prolific in fish. Before the Tondy joins the Gazelle, as it does in the district of the Nueir, it spreads irregularly over the low-lying country and leaves its shores quite undefined. In this way it forms a number of swamps, all but inaccessible, to which the Dinka, whenever they are threatened by plundering excursions from the Seribas, lose no time in driving their herds.

Although the Tondy is nearly as long as the Dyoor, it is very inferior in its volume of water. Like several of the less important rivers of this region, it flows for a long distance without any appreciable increase either in size or speed. These streams intersect the country and cut it up into narrow sections, which are rarely designated on the maps.

The second of the Seribas which I visited was called Geer, and was just four leagues to the south of the chief settlement. It was surrounded by bamboo-jungles, and was situated in a prolific corn-valley, watered by a tributary of the Tondy. It contained about 800 huts, occupied by Bongo, who had settled there.

The road to Geer, nearly all the way, was over a firm, rocky soil, through bush forests, swarming with wart-hogs (*Phacochœrus*). About three-quarters of a league on the way, stood a dense mass of lofty trees, not unlike an alder grove. It was traversed by rain-courses, and surrounded by low swampy steppes, which in the rainy season are entirely under water. The wood consisted mainly of tall uncariæ and eugeniæ, 80 feet in height, of which the long, straight stems were crowned by spreading foliage: it was the first bit of the

primæval forests which fill up the valleys through which flow the rivers of the Niam-niam. I paid many visits to this interesting spot; by the people in the Seriba it was termed Genana, the Arabic word for a garden. In its grateful shade grew dense thickets of red-blossomed melastomaceæ, intermingled with giant aroideæ (*Amorphophallus*), and bowers of creepers. The character of the vegetation was in striking contrast to the other forests of the district, and for the first time reminded me of the splendour of our northern woods—it was like an enclave of the luxuriant flora of West Africa, transported to this region of bushes and steppes.

On the adjacent plains herds of giraffes were very frequently seen. To bring down one of these giraffes was a matter of but little difficulty. They pace unconcernedly from bush to bush, taking their choice amidst the varieties of herbage, and I was surprised to find that it required half-a-dozen shots before a herd of nearly twenty could be started into flight; but, once off, there was no gaining upon them, and, like the fleetest of sailing-vessels, they disappeared on the horizon. I was on this day treated to the rare delicacy of a giraffe's tongue; there was some trouble in finding a dish on which it could be served, and I suppose that the longest fish-platter would hardly suffice for the display of this dainty. I had formerly tasted the flesh in Gallabat, and as I had abundance of beef in the Seriba, the carcase was distributed between my bearers. Roast giraffe may be reckoned amongst the better class of game, and is not unlike veal.

Geer provides the whole neighbourhood with bamboos. The African species (*Bambusa abyssinica*) seems to possess a character superior to what ordinarily belongs elsewhere to that useful product of the tropics. It is common on the lower terraces of Abyssinia and in all the rocky parts of the Upper Nile district, where the climate is sufficiently moist; it is found generally on river banks, though but rarely on the open steppes.

The canes grow to a height of thirty or forty feet, and the stoutest specimens that came under my notice were between two and three inches in diameter. They are not so swollen at the joints as the Chinese and Indian sorts; but this is an advantage, since they are more easily split. Even after repeated boiling, the young shoots were never eatable.

For two nights and a day whilst I was in Geer, the natives were abandoning themselves to their wild orgies, which now for the first time I saw in their full unbridled swing. The festival was held to celebrate the sowing of the crops; and confident in the hope that the coming season would bring abundant rains, these light-hearted Bongo anticipated their harvest. For the preparation of their beer they encroached very lavishly on their present corn stores, quite indifferent to the fact that for the next two months they would be reduced to the necessity of grubbing after roots and devouring any chance bird or even any creeping thing that might come in their way. Incredible quantities of "legyee" were consumed, so as to raise the party to the degree of excitement necessary for so prolonged a revel. In honour of the occasion there was produced a large array of musical instruments, a detailed account of which shall be given hereafter, but the confusion of sound beggared the raging of all the elements and made me marvel as to what music might come to. They danced till their bodies reeked again with the oil of the butter tree. Had they been made of india-rubber, their movements could scarcely have been more elastic; indeed, their skins had all the appearance of gutta-percha. The whole scene was more like a fantoccini than any diversion of living beings.

By the end of April the vegetation was so far developed that I might fairly reckon on a larger botanical collection on a longer excursion. Accordingly, accompanied by my servants and a few bearers, I set out towards the west, designing to visit the Seribas belonging to Kurshook Ali and Agahd, and to explore the River Dyoor. I was everywhere received

most hospitably, and thus had every encouragement to make similar trips amongst the various Seribas. As a rule I did not produce my letters of introduction to the agents until the second day, that I might prove whether my welcome was a mere official service, or was accorded freely and by good-will. I had never cause to complain: the agents, one and all, showed me the greatest attention, entertained me handsomely, and placed at my disposal all that I could desire. Their courtesy went so far that, although the country was perfectly safe, they insisted on providing me with a guard of soldiers. In addition to this, the local governors of the negro villages always escorted my little caravan from stage to stage. I found that the whole country was occupied, at intervals of five or six leagues, with settlements of the Khartoomers, in their palisaded Seribas. The inhabitants interchange their visits as freely as any gentlemen in Europe.

On the third day after my start all my bearers, who had contracted to serve me for a sum which would be represented by half-a-crown a day, deserted; they were afraid, perhaps not without cause, that their burdens of pickings and pullings would daily increase. This little incident, for which I was quite prepared, had its effect on the remainder of my journey. I for my part was perfectly agreeable to their desertion, for I could obtain gratis as many bearers as I required. Of course, I had nothing to pay the runaways, and was free from all charges to bearers for the future. In this I had no compunction, knowing that I had every right to claim the same assistance and courtesy that is accorded to any ordinary traveller amongst the Khartoomers' Seribas, and to have my baggage conveyed from one place to another.

My people had glorious times in the Seribas. There was mutton without stint; and whole animals were slaughtered even for my dogs: to my hungry Khartoomers it was literally a land flowing with milk and honey. Reserved for me were all that they considered the greatest delicacies that Central

Africa could produce, and in the way of fruit and vegetables I could not catalogue the variety that was served, from the sour Pishamin (*Carpodinus acidus*) to the horse-bean (*Canavalia*).

This excursion lasted from the 27th of April to the 13th of May. After leaving the chief Seriba we proceeded for about three leagues to the north-west, and arrived, first, at the Seriba owned by Abderahman Aboo Guroon. In 1860 this spot was visited by the Marquis Antinori, who, in spite of many privations, remained there throughout an entire rainy season. At that time a French hunter, Alexandre Vayssière, under the protection of the Dyoor chief, Alwal, with whose sons I made acquaintance, had founded a small settlement. Vayssière himself, to whose clever pen the *Revue des Deux Mondes* is indebted for some valuable articles on Central Africa, died the same year on the Gazelle River, falling a victim to a virulent fever. Aboo Guroon was formerly a servant of Petherick's, and had faithfully accompanied that praiseworthy traveller in his earliest endeavours to penetrate the Bongo country. He had obtained his name, Aboo Guroon (father of horned-cattle), from his noted courage and love of enterprise, and he was renowned amongst the traders as the first traveller to the Niam-niam.

The governors of the Seribas and the leaders of the Nubian expeditions may be divided into two classes: of these the one are hypocritical cowards, always saying their prayers, and yet always tyrannical to their subordinates; the others are avowed robbers. Far preferable, beyond a doubt, are the latter; they treat those weaker than themselves with a certain amount of generosity, not to say chivalry; to this class belonged Aboo Guroon. Close to his Seriba we had to cross the Molmull stream, which was for a long period represented on maps as an arm of the Dyoor, but I have proved that it is a collateral stream, which rises in southern Bongoland. In the rainy season it is 70 feet wide, and is only

passable by swimming, but it was now nothing more than a series of pools, the intervals of which were marked by patches of gneiss.

Ten leagues further west flows the Dyoor. Our route in that direction was in every way tiresome. For four leagues and a half we traversed a barren steppe, without being able to obtain so much as a draught of water, and the rough clods of clay were a continual impediment. We halted for the night in a small Seriba of Agahd's, called Dyoor-Awet. It lies on the summit of the watershed between the Molmull and the Dyoor, and from the hill towards the west an extensive view of the latter river is obtained. Being still somewhat of a novice in Central African travelling, I resolved, in order to avoid the heat of the day, to take advantage of the moonlight nights for proceeding on our march. In the dark, however, my guides and bearers, inexperienced in their work, lost themselves in such a labyrinth of paths that we were obliged to halt in an open meadow and make inquiries on all sides for the proper route. At length we arrived at some little enclosures of Deemo, a Dyoor chief. The huts were built on the slope of a small eminence of hornblende, a formation that I never noticed elsewhere to the south of the Gazelle; it extended as far as the right bank of the Dyoor, which, now at its lowest condition, was flowing sluggishly towards the north through steppes about a league in width.

The sandy river-bed was bounded by clay banks, from 20 to 25 feet in height, the entire thickness of the alluvium of the valley. The breadth of the bed at this spot was rather more than 400 feet, but at this season the running water was reduced to 80 feet wide and 4 feet deep. I was told that a few days previously the water had been up to a man's shoulder, and that the stream would not now fall any lower. Ten days later, on my return, I crossed the river about three-quarters of a league to the south, and although I found that the whole bed was covered, yet its depth was not above three

or four feet. Heuglin had crossed the Dyoor at a spot about 20 miles north of where I was, and on the 8th of April 1863 he found the stream about 300 paces in width, with a depth varying from one foot to three.

Among the Bongo and Dyoor alike, the river goes by the name of "Gueddy," whilst the Niam-niam, in whose territory lies the whole of its upper course, call it "Sway." It is ascertained to be one of the more important tributaries of the system of the White Nile. I found its source in Mount Baginze, in the eastern portion of the Niam-niam country, in lat. 5° 35′ N., and in almost the same longitude as that in which it joins the Gazelle; its main course, omitting the smaller windings, extends over 350 miles.

As we were wading across its clear waters, my servant, Mohammed Ameen, was suddenly attacked by a sentimental fit of home-sickness. He has been mentioned before as distinguished by the nickname of "the swimmer," and as a former Reis he was always more interested than anybody else in river-systems and hydrographical questions. Stopping midway in the channel, as though lost in contemplation, he suddenly apostrophised the waters: "Yonder lies Khartoom; yonder flows the Nile. Pass on, O stream, pass on in peace! and bear my greeting to the dear old Bahr-el-Nil!" An Egyptian would have been too stolid to be moved like this son of Nubia.

The bush-ranges on the opposite shore were enlivened by numerous herds of hartebeests and leucotis antelopes. I hurried on in advance of my caravan, hoping to enjoy a good chase, but my attempt only resulted in a circuitous ramble and in extreme fatigue. It was not until the middle of the day that I rejoined my people in a little village of the Dyoor, and by that time, inexperienced as I was, the heat, the running, and the fear of losing my way had conspired almost to deprive me of the use of my senses. The numberless herds that, without making a stand, continually scampered across

my path, still further increased my bewilderment. I was far onwards on my way back when a flock of domestic goats, startled by the apparition of a stranger came running athwart my way. They were of a reddish colour, and, had they been in the midst of a wilderness, might easily be mistaken for the little bush antelope (*A. madoqua*), so common in these parts. I was just about to send a last despairing shot amongst the harmless creatures, but discovered my mistake betimes. When I afterwards related my adventure for the entertainment of my people, one of them told a similar anecdote of a previous traveller, who, however, had actually shot a goat, and when the enraged owner insisted upon compensation, could not be induced, even in the face of the *corpus delicti*, to acknowledge his error. The man who told this had been an eye-witness of the affair, and described in the liveliest manner the contest that had raged over the zoological character of the hapless goat.

Rather more than a league from the Dyoor, in an irregular valley sloping towards the river and surrounded by wooded hills, was situated, but newly built, the chief settlement of Kurshook Ali. Khalil, the aged governor, received me most kindly. After the entire destruction of the former establishment by fire, he had erected in its place quite a model Seriba. This is depicted in the background of the accompanying drawing. In front is a majestic khaya-tree, which in years to come will probably be the sole surviving relic in the landscape. Several of the most important types of vegetation are also represented: on the left are the large candelabra-euphorbia and borassus palms, and on the right appear the little gardenia trees, of which the fruit resembles the wild pear or the crab-apple; by the side of these are two deserted white ant-hills.

Some of my most pleasant reminiscences of African life are connected with this spot. Here it was that, two years later, after experiencing the calamity of a fire, I was hospi-

I THE CHIEF SETTLEMENT OF KURSHOOK ALI. A MAJESTIC KHAYA-TREE. p. 188.

tably received, and passed several months in hunting over the well-stocked environs. In no other Seriba did I ever see the same order and cleanliness. The store-houses and the governor's dwelling stood alone on an open space within the palisade; around the exterior, at a considerable distance, were ranged the huts assigned to the soldiers and other dependants. The unhealthiness of having a crowd of wretched dwellings huddled together, the contingent danger of fire amongst so many straw huts, and the disadvantageous lack of space in case of an attack, all had their effect in inducing Khalil to make these innovations.

On my arrival I was surrounded by a bevy of real Niam-niam,* who had been conveyed hither by an expedition lately returned from their country. They stood and gaped at me and my belongings with far more curiosity than had been evinced by the stolid natives of the country. Whilst I was supposed to be listening to the performances of the resident Bongo on the guitar, it seemed as though these Niam-niam would never tire of examining my paraphernalia. My watch, breech-loader, revolver, my clothes, and even my lucifer matches had to be scrutinised separately. Nothing of equal wonder had crossed their experience; and what with my white skin and my appearance altogether, I looked to them like some being from another world.

Amongst the acquaintances that I made here I must not forget to mention a speculative slave-trader from Tunis, who was now making a second journey over Darfoor. He could speak a little French, and, to the astonishment of every one, he could read the names upon my maps. He was the most refined of his calibre that I had ever met, and to me was a sort of *deus ex machinâ*. Whenever I saw him I had always a vague feeling that he must be some distinguished explorator in disguise—perhaps a Burton or a Rohlfs. Our

* The word Niam-niam has the Italian pronunciation of "Gnamgnam."

complexions were alike, our education had been alike, and so in these distant regions we met like fellow-countrymen. In an unguarded moment I grasped his hand, drew him aside, and begged him privately to tell me who he was and where he came from. His loud laugh of surprise at my inquiry was quite enough, and in an instant completely dispelled any illusion on my part.

The fact of meeting a slave-trader from Tunis in this spot so completely remote corroborates the imputation of an unexpected extent of the slave trade in Africa. This polished Tunisian was, to say the least, in many respects superior to the adventurers who ordinarily come from Darfoor and Kordofan. Of them nothing can be said too bad. They pursue their revolting craft under every pretext; coming as fakis or priests, they make their iniquitous exchanges for that living ebony which consists of flesh and blood, and, altogether, they are as coarse, unprincipled, and villanous a set as imagination can conceive.

It is pleasant to turn from these incarnations of human depravity to the calm undesecrated quiet of the wilderness around. Two leagues to the west brought us to the Wow, a river of inferior magnitude, but which was very charming. Meandering between rocky slopes, overhung with a rich and luxuriant foliage, and shadowed at intervals by stately trees, after a few miles it joins the Dyoor. Its bed, at its full measure, is 150 feet wide; but when I saw it, on the 1st of May, it exhibited merely two little rills trickling merrily over a rough sandy bottom. In proportion to its size it seemed to retain in the dry season less water than the Dyoor. It rises in the heart of the Niam-niam country, where it is called the Nomatilla; as it passes through the Bongo it is termed the Harey; whilst just above its confluence with the Dyoor, to which it contributes about a third of its volume, it goes by the name of the Nyanahm. It divides the people of the Dyoor into the two tribes of the Gony and the Wow.

On the banks of this, stretched beneath a noble tree, of which the age far exceeded any tradition of the natives, I enjoyed a noonday lounge. My dogs were never weary of awakening the echoes of the forest, which would give repeated answers to their cries. I was constrained to move on by the people who had come out to welcome me from the neighbouring Seriba of Agahd, known simply as Wow, at a distance of a league and a half to the west. The possessions of Agahd's company in this district are much scattered, and are interspersed amidst the territories belonging to other merchants. Their subordinate settlements extend far west into the lands of the Kredy, their expeditions reaching even to the western frontiers of the Niam-niam.

The further the advance towards the west from the Dyoor, the more rapid is the increase in the level of the country. The ascent indicates the progress from the basin of the Gazelle to the central highland. The Wow Seriba occupied the centre of a gentle valley sloping towards the west. The bottom of this valley, at the time of my visit, was traversed by a marshy strip of meadow, which, in the rainy season, forms a running brook that flows into the river. A steep descent of a hundred feet bounds the valley on the south-west. I was struck by the richness and diversity of the foliage—a peculiarity in this part of Africa, where vegetation seems very much to run to wood, and develops itself in bushes and in trees.

Of the trees which adorn the hanging rocks I may mention a few which are remarkable on account of their fruit. The Göll of the Bongo bears pods which, in appearance and in flavour, resemble those of the St. John's Bread, and on that account the Nubians, who use the skins as tan, call it the Caroob. Its wood, like palisander, is carved by the natives into pretty stools and benches. Then there was the Oncoba, from which are made the little round tobacco-boxes, known in the Arabian trade on the Red Sea; and there was

the *Strychnos edulis*, of which the fruit is not unlike a pomegranate, containing an edible pulp inclosed in a brittle woody shell. Together with these grew the Ximenia, a shrub common to the tropics of both hemispheres. The blossoms of this emit a soft fragrance as of orange flowers, and it bears a round yellow fruit about the size of a cherry, which is about as sour as anything in nature. The flavour is like a citron, and the soft nut-like kernel is eaten with the juicy pulp. Several kinds of sycamore, apparently of the Egyptian species, bear edible figs, but they are poor and insipid. A beverage refreshing as lemonade is prepared from the great creeper carpodinus. This plant is well known in the Guinea trade for its produce of caoutchouc. Its globular fruit (the sour pishamin of the colonists) contains a large number of kernels embedded in a fibrous pulp; its sourness exceeds that of the citron. The sarcocephalus, the wild original of the species that is cultivated in Guinea, does not here grow larger than a peach; in shape and colour it may be compared to a strawberry, though in flavour it resembles an apple: eaten to excess it acts as an emetic. The white flowers of this Rubiacea smell like orange-blossoms. The pericarp of the cordyla contains a green honey-pulp, and that of the detarium a sweetish yellow powder. Many species of vitex bear an olive-like fruit with a sweet aromatic flavour; and spondias offer great tempting plums of a bright yellow, which, however, leave a harshness in the throat. The ripe berries of the widely diffused vangueria taste like gingerbread, and this peculiarity, in a certain sense, belongs to nearly all the edible fruits of Central Africa: whatever is not sour and astringent, like unripe gooseberries, is somewhat sweet and dry to the tongue. With the exception of the plantain (*Musa sapientium*), which has every claim to be considered a native of Equatorial Africa, all other fruits are either sour and grating on the palate, or they are sweet with an after sensation of dryness.

The most perfect examples of each of these are the pishamin and the date; intermediate to them both is the tamarind.

On account of the numerous gnats and gadflies on the west of the Dyoor, cattle-breeding suddenly ceases, and even in the Seribas there are found only a few sheep and goats. On the other hand, wild buffaloes, after being entirely missing for a long way to the east of the river, now re-appear. We had not come across any since we entered the region of the Gazelle, and the first that we now saw were on the southern frontier of the Bongo territory. Only one kind of buffalo is known in this part of Africa, but the difference in the formation of their horns is so remarkable that cows and bulls appear quite like two distinct animals. In the bulls the roots of the horns meet at the top of the head, and cover the whole of the forehead, whilst in the cows they are separated by nearly the entire width of the brow. The habit of this animal is different from what is ordinarily found elsewhere; for in these regions buffalo-hunting is considered by no means a dangerous sport. After my recent experience on the White Nile I was surprised to find so many ready, without hesitation, to accompany me to the chase. For myself I had rather a dread of the animal, as my predecessor, Herr von Harnier, had fallen a victim to a wild buffalo, which had mutilated his body to such a degree that it could not be recognised.

On the morning after my arrival I had the luck to surprise a small herd in a swamp. They immediately took to flight, with the exception of two, a cow and her calf, which looked about, astonished, after their disturber. I and my companion fired simultaneously, and we should have secured the sucking calf, if the swamp had not been in our way.

In flavour, the best parts of the buffalo-meat almost rival that of a fattened ox: it is tougher and more stringy, but, in spite of everything, it is juicy and palatable. The flesh of the tame species of southern Europe is, on the contrary,

worse than camel's flesh, and may indeed be pronounced uneatable.

Gladly I should have extended my tour westward, to the Kosanga mountain, and as far as the Seribas of Zebehr, Bizelli, and some others. The agents were always courteous, and, unencumbered, I could easily have accomplished my desire; but my botanical collection had largely increased, and my supply of paper was exhausted, so that I was constrained to give up my project, and to return. The rapid development of vegetation, moreover, warned me that I ought to be back at my quarters in Ghattas's Seriba before the beginning of the rains, so that for the whole of the season, after they had decidedly set in, I might concentrate my energies on the investigations which were the proper purpose of my journey. Accordingly, after exploring the immediate neighbourhood of Wow, I returned at once to Kurshook Ali's Seriba, where I spent a few more days in some brief excursions.

Dense still were the woods around the settlement, although Khalil, in order to obtain arable land, was daily thinning them by fire. The small depth of soil in these parts, often barely a foot, is one of the causes of the instability of the dwellings which are run up on it, and which are also liable to destruction from worms above and from white ants below. When the inhabitants are compelled to rebuild, they prefer to settle on fresh territory—they choose virgin soil, and hence it arises that not only the villages of the natives, but even whole settlements of the Nubians, are continually changing their sites. Every place bears the name of the native chief; when he dies, therefore, the former name falls into oblivion. In consequence of this, it becomes very difficult to fix on the maps names and localities, which can rarely be permanent beyond a period of at most ten years. The only enduring landmarks are afforded by the water-courses: ages pass on, and these change but little as they fulfil their function in the economy of nature.

The environs of Kurshook Ali's Seriba abound in every variety of game. Genets, civets, zebra-ichneumons, wart-hogs (Phacochœrus), wild pigs, cats, lynxes, servals, caracals, and the large family of the antelopes, all find here their home.

In this neighbourhood I killed my first hartebeest and a leucotis antelope. The hartebeest (*Antilope caama*) is common throughout the greater part of the continent, and varies in its form, its colour, and the shape of its horns, according to sex, age, and adventitious circumstances. In zoological collections two specimens are rarely seen exactly like one another.* Called "karia" by the Bongo and

Central African Hartebeest.

"songoro" by the Niam-niam, the hartebeest is the most frequent of all the larger game. It is generally found in small herds, varying in number from five to ten, its haunts being chiefly uninhabited tracts of wilderness. In the cultivated districts it prefers the light bush forests in the vicinity of rivers, though it is never seen actually in the river valleys. It takes its midday rest by standing motionless against the

* It may not be superfluous to give a picture of an old buck, nor to remark that the females also have horns.

trunks of trees; and by its similarity in hue to the background which it chooses, it often eludes all observation. Throughout the rainy season its colour is bright—a sort of yellow-brown, with a belly nearly white; but in the winter it tones down to a dullish grey. With the exception of the leucotis, its flesh is the best eating of any game in the country.

The leucotis antelope * is the species that congregates in

Leucotis Antelope (male).

the largest number in any of the districts that have been hitherto explored. In the dry season they are often seen in the wadys in large herds, varying from 100 to 300 head; during the rains they resort to the more elevated forests. That is their pairing time, and they divide into smaller groups. These graceful animals have the same habit as the South African spring-bok; running at full speed, with outspanned legs, they often bound four and five feet high, and jump clean over one another. The female, which has no horns, in colour and size very much resembles the yalo (*A. arundinacea*), but it can be easily distinguished by the hair on the metatarsus being black, while in the yalo it is grey.

* Separate illustrations are given of the male and female.

Throughout the whole of this neighbourhood are numerous plains of ferruginous swamp-ore; only in the rainy seasons, when the rainfall is at its height, are these covered at all with grass, which at its best, compared to the luxuriant vege-

Leucotis Antelope (female).

tation around, is a meagre down, hardly equal to our poorest pasture lands. On this plateau the rains of March and April begin to fill the numerous clefts and chasms; the pools thus formed contain a variety of interesting water-plants, which disappear completely when the waters again subside. Wherever the red rock is exposed, its surface is adorned by the rosy blossoms of the dianthera, a species of capparis, which here supplies the place of our viscous catch-fly and cuckoo-flower. Nowhere in the exuberant tropics are we more vividly reminded of our own scenery than in such spots as these, where, on the edge of woody precipices and surrounded by the smiling green of the sward, gleam these gay patches of dianthera. The naked stone covered by a low detached overgrowth, in picturesque grouping, rivalled all that I had ever seen. The gardenia trees fill the air with the fragrance as of a bower of orange blossoms and jasmine.

The month of May here, as in Europe, is a month of flowers, amongst which the world of butterflies pass their ephemeral existence. As a rule, these lepidoptera were not

larger nor more diversified in form and colour than the European, but, in their aggregate, they were full of beauty. The dews of night were not sufficient for their thirst, and in motley masses they assembled round every puddle to enjoy the precious moisture. By a skilful swing of the butterfly-net I could catch a hundred at a time. They continue to swarm in this way till the beginning of July. At times I saw them thronging all amongst the foliage, and giving to many a plant the appearance of being covered with the most variegated blossoms; the bare rock, though destitute of vegetation, became as charming as a blooming meadow. The quantities of butterflies in this district are very large in comparison to what are found in the northern regions of Africa at this season.

Two leagues to the south of the new Seriba was the site of the one which had been burnt. But few vestiges remained, for nature here soon effaces what fire may have spared. The only surviving evidence of its ever having been the resort of men was a thriving grove of plantains (*Musa sapientum*). The shoots had been introduced from the Niam-niam lands. In the meagre households of the Nubians, fruits and vegetables are hardly considered necessaries; indolence and distaste for work cause the gardens to be much neglected. By my own experience, I have found that all garden produce of the southern regions can be cultivated here at the outlay of very little attention. The plantain bears fruit within eighteen months of its first sprouting.

Copious is the river as it flows by the place, shaded by magnificent afzelia, filæa, and syzygium. The impenetrable jungles of bamboo, which extend on either side, are the abode of a large number of bear-baboons. It was in vain that for some hours I pursued one after another of these bellowing brutes: immediately they became aware of my approach, they were knowing enough to quit their exposed positions on the trees and conceal themselves amidst

the waving grass. The jungle swarmed, too, with great wart-hogs (*Phacochærus*), which appear as ineradicable as the wild boars of Europe. The chase of these had small attraction for me, aware as I was of the extreme unsavouriness of their flesh.

On my way back to the Seriba I made a slight detour, in order to visit the village of the Dyoor chief Okale. This lies to the east, upon a small stream, the banks of which are shadowed by some splendid woods that display the glories of the Niam-niam wilderness. It was like an enclave of the south transported to the bushwoods of the north. I looked here that I might discover the palm-tree, which the Khartoomers call the Nakhl-el-Faraoon (or Pharaoh's date-palm), and of which they had given a wonderful description that roused my curiosity. I soon satisfied myself that they really meant the *Raphia vinifera*, which grows far and wide throughout tropical Africa, although probably, in this direction, this may be its limit. A considerable number of the trees and plants characteristic of the Niam-niam lands occurred to me in my rambles, and amongst them the blippo (*Gardenia malleifera*), with the inky sap of which the Niam-niam and the Monbuttoo delight to dye themselves.

Whether we advanced through villages or hamlets, we always found the overseers in their full state. Their official costume was everywhere a long chintz shirt. From their sparkling eyes beamed forth the delight with which they regarded my appearance, doubtless to them singular enough. Most readily they admitted me to every corner of their households, whence I procured one curiosity after another, and what I could not carry away I copied into my sketch-book.

Although I could not manage, in the course of an excursion not occupying three weeks, to traverse the entire district of the Dyoor, I nevertheless very much increased my familiarity with their habits, of which I will conclude this chapter with a concise account.

Dyoor is a name assigned by the Dinka, and is synonymous with men of the woods, or wild men. This designation is a name of contempt, and is intended to imply the condition of poverty, in which, according to Dinka ideas, the Dyoor spend their existence. Of course, it refers to their giving their sole attention to agriculture, to their few goats and poultry, and to their disregard of property in cattle. They speak of themselves as Lwoh. They use the Shillook dialect unaltered except in a few expressions which they have adopted, and are anxious to claim a northern origin, specifying their progenitors as O-Shwolo, or Shillooks. The area of their territory is quite small, and their number cannot exceed 20,000 souls.

On the north they are bounded by the numerically large tribe of the Dembo and some smaller kindred clans. Eighty miles to the south of them, but separated by the entire width of the Bongo country, reside the Belanda, a tribe of which the customs are modified by their intercourse with the Bongo, but which still make use, with very minor differences, of the Shillook dialect. These Belanda are partly under the surveillance of the Niam-niam king Solongho, and partly tributary to the intruders from Khartoom.

The chequered map of Africa suggests to every reflective mind many considerations as to how any advance in civilisation can be possible. There is an utter want of wholesome intercourse between race and race. For any member of a tribe which speaks one dialect to cross the borders of a tribe that speaks another is to make a venture at the hazard of his life. Districts there are, otherwise prosperous in every way, which become over-populated, and from these there are emigrations, which entail a change of pursuits, so that cattle-breeders become agriculturists and agriculturists become hunters living on the chase; districts again there are which shelter the remnant of a people who are resisting oppression to the very verge of despair; and there are districts, more-

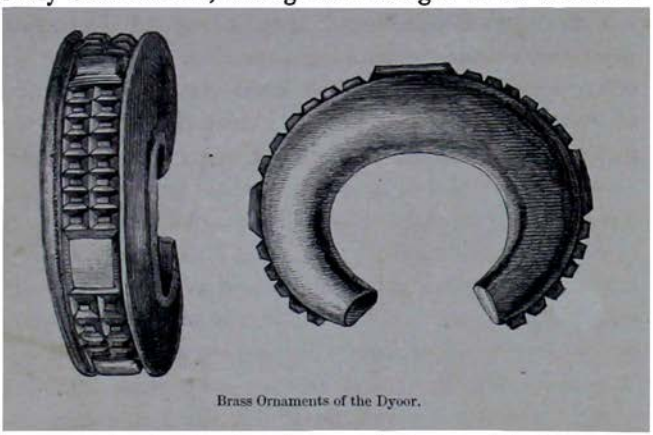
over, which have been actually reduced to a condition of vassalage and servitude; but the case is here altogether without example of a district which, whatever be its other fluctuations, has ever submitted to a change of race or of tongue.

Former travellers, although they have found their way to the Dyoor without concerning themselves with the origin of the people, appear to have made the observation that their complexion is a shade lighter than that of the Dinka. For my part I am convinced that this is so; not that I should feel justified in insisting upon this token as showing a difference between Dinka and Shillooks. Probably, the colour of the skin of the Dyoor loses something of its darker hue from their living in the shadows of their woodlands; but this is a question which involves meteorological and geographical considerations which are beyond our grasp.

In spite of their intercourse for many years, and their partial dependence upon the Dinka, the Dyoor have not departed from the Shillook mode of decorating themselves. Just on the extreme borders a few may every now and then be found imitating the radial stripes upon the foreheads; but it is quite uncommon for either sex to tattoo themselves. Neither does their daily familiarity with the Nubians induce them to adopt a modest dress. They only wear round the back of their loins a short covering of leather, something like the skirts of an ordinary frock coat; a calfskin answers this purpose best, of which they make two tails to hang down behind. Anything like the decorations of the hair which have excited our wonder amongst the Shillook and the Dinka is here totally rejected, and the Dyoor, men and women alike, have their hair close cropped.

The favourite ornaments of the men very much resemble those of the Dinka, consisting of a collection of iron rings below the elbow and a huge ivory ring above the elbow. One decoration peculiar to themselves consists of some

heavy circlets of molten brass, which are very elaborately engraved. Brass, as known amongst the people, is called "damara," and is about thrice the value of copper; it had been introduced into their traffic long before the arrival of any Khartoomers, having been brought as an article of



Brass Ornaments of the Dyoor.

commerce by the Dembo, who, as neighbours of the Baggara, were led into business relations alike with Kordofan and Darfoor on the one hand, and with the northern negroes on the other. Our fine metals, one and all, were quite unknown amongst them.

Their women, too, in hardly any respect differ from the Dinka women; like them burdening the wrists and ankles with a cluster of rings. Very frequently one great iron ring is thrust through the nose, the hole to admit it being bored indifferently through the base, the bridge, or the nostrils. The rims of the ears also are pierced to carry an indefinite number of rings. These deformities are especially characteristic of the Bellanda, who sometimes attach to their nose a dozen rings at once.

One of the iron decorations which is most admired, and which is found far away right into the heart of Africa, I first saw here amongst the Dyoor; I mean the iron beads or per-

forated little cylinders of iron, strung together. These have some historical interest attached to them in connection with the development of trade in Africa, arising from the fact that they were earlier in use than glass beads, to which they must be compared. Glass beads, obviously, were only brought into the market after it had been proved that the natives would be willing to wear ornaments like in form but of a lighter material than the hard metal which they were wont to forge into shape piece by piece. The Japanese and other inhabitants of Eastern Asia are known to trick themselves

Portrait of a Dyoor.

out in steel beads, thus evidencing their long exclusion from all intercourse with Europe. In the Soudan these strings of

beads were principally made at Wandala, and Barth has specially noticed them at Marghi. Every tribe which I visited in proceeding inland from the Gazelle I found to retain the preference for beads made of iron.

The derivation of the stock from a negro race of the nobler kind, and one which has a small development of jaw, such as the Shillook, may be fairly understood from the accompanying portrait. The sitting figure is a likeness which I took at my leisure of one of my bearers. I thought it would illustrate the graceful slimness of the limbs, which nevertheless are all in due proportion. It may serve, too, in a degree to exemplify the appropriateness of the expression "swamp-man," which I have several times employed, and moreover may help to justify the comparison which has likened them to a bird.

Portrait of a Dyoor.

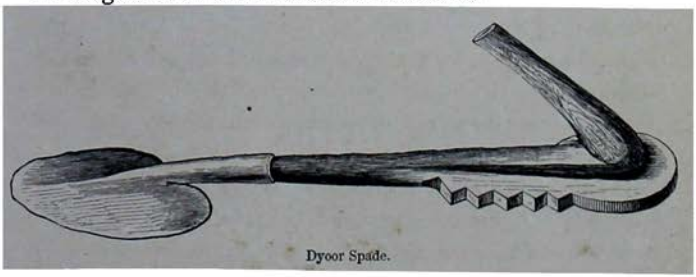
In recent times they have lost some of their ancient habits. For instance, the practice of mutual spitting, which was long

the ordinary mode of salutation, has fallen into desuetude. Throughout the entire period of my residence in Africa I was never a witness of it more than three times: and in all these cases the spitting betokened the most affectionate goodwill; it was a pledge of attachment, an oath of fidelity; it was to their mind the proper way of giving solemnity to a league of friendship.

The spot which the Dyoor inhabit is the inferior terrace of the ferruginous formation in the district. The consequence is that they are quite at home with all iron work. The Dinka, although they do not settle down close to them, because of the hostility of the Bongo, yet are glad to welcome the Dyoor, in order to avail themselves of their aid in getting at the iron, which would otherwise be unsecured. It

Spear Head.

might almost be said that every Dyoor is a smith by profession. The result of their toil, however, does not so much find its way to the underground stores of the Dinka as to the magazines of the Khartoom merchants.



Dyoor Spade.

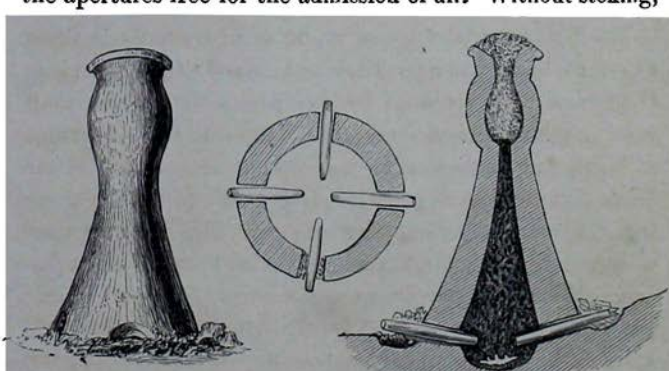
The accustomed shape in which the raw material is used as a medium of exchange is in spear heads* or in spades.

* The spear-heads, as represented in the engraving, are about three-quarters of a yard in length.

Throughout the whole district of the Upper Nile these answer all the purpose of our current coin. Although the superficial veins of iron ore, for hundreds of miles, do not differ much in their appearance, there are only certain localities which produce an ore that, under the primitive mode of smelting, yields a remunerative supply of genuine metal. One of these prolific veins is found in the proximity of Kurshook Ali's Seriba. With a perseverance for which I could not have given them credit, the natives have dug out trenches some ten feet deep, from which they have obtained a material very like our roe-stone. Considerable quantities of red ochre are discovered, but they are not turned to any account, through ignorance of a proper way of manipulation.

Just before the commencement of seed-time, in March, the Dyoor make a general move away from their huts, partly for the purpose of dragging the rivers for fish, and partly to busy themselves with iron-smelting in the woods. In the shaded centre of a very wooded spot they construct their furnaces of common clay, making them in groups, sometimes as many as a dozen, according to the number of the party. Their wives and children accompany them, and carry all their movables. In the midst of the wilderness, otherwise so desolate, they form a singular picture. The stems of the trees gleam again with their lances and harpoons; on the branches hang the stout bows ready for the buffalo hunt; everywhere are seen the draw-nets, hand-nets, snares and creels, and other fishing-tackle. There is a mingled collection of household effects, consisting of gourd-shells, baskets, dried fish and crocodile, game, horns, and hides. On the ground lie piles of coals, of ore, of cinders, and of dross. Petherick, the first explorer of this Dyoor district, has given a very accurate account of their primitive method of smelting iron, so that I may be repeating in a degree what has been related before: many things, however, there are which appeared to me under a somewhat different aspect.

The smelting-furnace is a cone, not more than four feet high, widening at the top into a great goblet shape. So little deviation was there in the form of any that I saw that all seemed to me to be erected on precisely the same model. One obstacle to the construction of larger furnaces is the extreme difficulty of preventing the mass of clay from cracking in the process of drying. The cup-shaped aperture at the top communicates by a very small throat with the cavity below, which is entirely filled with carbons. Into the upper receiver are thrown fragments of ore, of about a solid inch, till it is full. The hollow tunnel extends lower than the level of the ground; and the melted mass of iron, finding its way through the red-hot fuel, collects below in a pile of slag. At the base there are four openings: one of these is much larger than the others, and is used for the removal of the scoriæ; the other three are to admit the long tewel-irons, which reach to the middle of the bottom, and keep the apertures free for the admission of air. Without stoking,



Dyoor Smelting-furnace.

the openings would very soon become blocked up with slag. In reply to my inquiry I was told that bellows are never employed; it was said that too fierce a fire was injurious, and caused a loss of metal. A period of a day and a half, or

about forty hours, is requisite to secure the product of one kindling. When the flames have penetrated right through the mass of ore until they rise above it, the burning is presumed to be satisfactory.

Amongst the Bongo the furnaces are different, being generally constructed in three compartments, and fitted with bellows. They also place layers of ore and fuel alternately.

The deposit of metal and fuel is heated a second time, and the heavy portion, which is detached in little leaflets and granules, is once more subjected to fire in crucibles of clay. The particles, red-hot, are beaten together by a great stone into one compact mass, and, by repeated hammering, are made to throw off their final dross. Nearly half of the true metal is scattered about during the progress of the smelting, and would be entirely lost if it were not secured by the natives. In regard to its homogeneousness and its malleability, the iron procured in this way is quite equal to the best forged iron of our country.

The Dyoor and the Bongo appear almost equally ignorant about charcoal-burning. They understand very little about the exclusion of air from the furnaces, or of burning their wood in piles: their science seems limited to the combustion of small fragments heaped up over one another till the fire below them is choked, or subdued by pouring water upon the top. I am not aware whether the other negroes have mastered the secret of charcoal-making; but if what has been said about the Dyoor holds good about Africa in general, it accounts at once for the remarkable fact that in spite of the abundance of the crude material, iron is so little employed. There is a universal absence of lime, so that stone erections are quite unknown.

If a comparison might be instituted, I should say that in Africa iron might be estimated to have a value about equivalent to copper with us, whilst the worth of copper would correspond to that of silver.

POOR VILLAGE IN WINTER.

For fifteen years have the Nubians now been brought into contact with this region, but they have never taught the natives either the way of making bricks or any intelligent conception of the use of charcoal. Themselves too lazy to improve the treasures which a bountiful Nature has flung amongst them, they are too idle and too indifferent to stimulate even the people they have subjugated to put forth any energy at all. And this is but one proof out of many of the demoralising tendency of Islamism, which would ever give a retrograde movement to all civilisation.

Throughout Africa I have never come across a tribe that has not adopted a mode of building huts which, alike with respect to exterior and interior, is not peculiar to itself. The huts of the Dyoor do not resemble the mushroom shapes of the Shillooks, nor are they like the substantial huts of the Dinka, massive and distinguished by small outbuildings and porches. Again, they could not for a moment be mistaken to be dwellings of the Bongo, because they have no straw projections about the top of the roof. In a general way they are a yet more simple and unadorned construction—not that they are destitute of that neat symmetry which seems to belong to all negro dwellings. The roof is a simple pyramid of straw, of which the section is an equilateral triangle, the substructure being all of wickerwork, either of wood or bamboo, and cemented with clay.

Inside every hut there is a large receptacle for storing whatever corn or other provision is necessary for the household. These are made of wickerwork, and have a shape like great bottles. To protect them against the rats, which never fail to carry on their depredations, they are most carefully overdaubed with thick clay. They occupy a very large proportion of the open space in the interior; very often they are six or seven feet in height, and sometimes are made from a compound of chopped stubble and mud. After the huts have been abandoned, and all else has fallen into

decay, these very frequently survive, and present the appearance of a bake-oven gone to ruin. In the Arabic of the Soudan this erection is called a "googah." It is derived from the Dinka; the huts of the Bongo and the Niam-niam having nothing of the sort, because they build detached granaries for their corn.

The picture which is here introduced is a representation of the rural pursuits of this peaceful tribe. It is presumed to be winter time, when, for some months to come, no rain is to be expected. It may be taken as illustrating what might be witnessed at any time between October and April. The tall erections adjacent to the huts contain the various grain requisite for the next seed time, and may be supposed to be full of the sorghum, the maize, and the gourd.* It is better to let these be exposed to the sun rather than to run the risk of having them devoured by rats or vermin in the huts. Underneath these structures the goats are hid; besides these, dogs and some poultry are the only domestic animals they keep.

The open space in front of the huts consists of a plain, most carefully levelled by treading it down. Upon this floor, which is perfectly hard, the corn is winnowed; and it serves as a common area for all domestic purposes. In front of the huts, too, sunk to some depth below the ground, there is a great wooden mortar, in which the corn, after it has been first pounded by the primitive African method of stones, is reduced to a fine meal by rubbing with the hands. The Dinka also use these sunken mortars, which are hewn out of some hard wood; but the Bongo and Niam-niam carry with them movable mortars of a smaller size.

To the right may be observed a man, who is collecting iron ore, and one of the wicker baskets which belong to the

* The Dyoor cultivate very nearly the same crops as the Bongo, and these will be described with reference to that people.

reserve of corn. Great gongs hang upon the posts towards the left, and some of the massive bows, of which the strings are ready stretched by a billet to serve as snares. This artifice is employed by several of the people of this district to facilitate their chase of the wild buffaloes. Very strong straps of hide are strained across the tall grass of the low-lands, where the buffaloes congregate. One end is fastened either to a tree or to a peg driven into the ground, the other end attached to the bow. This forms a kind of noose which, through the rebound of the billet, tightens itself about the legs of the buffalo when it strains it. The startled beast makes a bound, and is immediately fettered. The hunters, who had been lying in wait, seize this moment and, with their lances, strike at the prey, which, if not utterly entangled, is sure by the bow to be obstructed in its running. In a similar way all the larger antelopes are captured, especially the powerful eland, at which it is hard to get, even after it has been driven to the marshy levels.

Good large families have the Dyoor; and were it not that the Nubians come upon the land, and every year carry off at least half the corn that is grown, there would long ago have been, as with their kindred on the White Nile, a dense Dyoor population. They partake also of the skilfulness of the Shillooks in obtaining resources for livelihood in various ways: they pursue the chase, they practise fishing when they have the chance; they are industrious in tillage; they thoroughly appreciate the value of cattle, and would like to possess it, although in their new settlement they can boast little more than a few kids and goats. To have a well-stocked poultry-yard, and to possess that friend of man, a good dog, is essential to the satisfaction of a Dyoor household. Upon these the attention of the men is centred, and on these they make their largest outlay. If they escape servitude to the Nubians, and are not obliged to turn porters to convey their burdens, or builders to erect their dwellings,

they employ themselves with their fishing and hunting, or in practising the art of Tubal Cain. Labour in the fields is all done by the women, upon whom also falls the entire domestic superintendence as well as the actual work of the house; they make all the wickerwork and do all the manipulation of the clay; they trample down the level floor and mould the vessels of every size. It is remarkable how they manage with the mere hand to turn out immense vessels which, even to a critical eye, have all the appearance of being made on a wheel. In order to render a clay floor perfectly level and free from cracks they work in a very original way. They procure from the woods a piece of tough bark, about three feet long; they then kneel down upon the clay, and persevere in patting it with their pieces of bark till they make the surface of the soil as smooth as though it had been rolled. In a very similar way they prepare the graves for their dead, which they arrange very close to their huts. A circular mound, some three or four feet high, indicates the situation of the last resting-place of a Dyoor so long as the violence of the rain allows it to retain its shape; but a very few years suffice to obliterate the final vestiges of these transient memorials.

Affection for parents and for children is developed amongst the Dyoor much more decidedly than in any other Central African tribe which I have known. In a way that I have not observed among other pagan negroes, they place their infants in long baskets that answer the purpose of cradles. There is a kind of affection which even brutes can display to their offspring as well as human beings. In the very lowest grades of human society there is ever a kind of bond which lasts for life between mother and child, although the father may be a stranger to it. Such, to say the least, is the measure of affection which the Dyoor show to their little ones. Nor is this all; they have a reverence for age; and in every hamlet there are grey heads amongst them.

CHAPTER VI.

Laying out a garden *à l'Européenne*. Hunting adventure with a bastard Gems-bok. Death of Arslan. Physiognomy of the vegetation. Character of the soil. Geography of plants. Destruction of a Seriba by natives. Seriba law. Cattle-raids on the Dinka. Tour round Ghattas's Seribas. Geography at Geer. Fish of the Tondy. Fear of ghosts in Koolongo. Caves of Gubbehee. Central African jackal. Bamboos in blossom. Triumph of Nature over her traducers. Joint-stock distillery in Gurfala. Nubian love of drink. Petherick's Mundo. Unsuccessful chase in the long grass. Two bush-antelopes. Cultivated plants of the district. Cereals. Large growth of sorghum. Leguminous fruits. Oily fruits. Tubers. Vegetables. Tobacco. Smoking in Africa.

I WAS again in Ghattas's Seriba on the 13th of May. The arrival of an ivory caravan on its return journey had brought an unwonted animation. But for me very soon the ordinary routine of life came back, and one day passed on just like another in the closest intercourse with Nature. Except during some temporary excursions to the Bongo, this Seriba would be my residence for some months to come, and I set to work to make my quarters as comfortable as I could in a good-sized hut which had been vacated for me.

The first thing I did was to lay out a large vegetable garden, a task which engaged not only all my own people, but gave occupation to not a few of the black slaves of the place. I had not only brought with me a good supply of pickaxes and spades, but I had likewise a capital collection of seeds. Thus I hoped at once to provide for my own necessities, and to prove to the natives the productiveness of their soil. The plot of ground was nearly 200 paces square, and the next thing was to enclose it with a hedge of straw,

and to lay it out with a series of parallel beds. The larger number of these beds I planted with the best sorts of maize, of which I had procured the original ears from New Jersey.

Seventy days after sowing I reaped the crop, and the ingathering did not simply answer my highest expectations, but surpassed in quality the original stock; the kinds which seemed to succeed best being those which after they are dry are horny and transparent.

Tobacco from Maryland grew to an immense height, and I gathered several hundredweights of it. There was not altogether so much of a deficiency of tobacco in the country as of the larger leaves, of which use could be made for rolling into cigars. In Egypt the Virginian tobacco can be made to grow leaves as large as the palm of one's hand, but in the negro districts the whole produce is quite diminutive. Negroes always sow tobacco under cover before they plant it out; the midday sun of Central Africa is too powerful for the seed, which infallibly perishes in a parched soil. I had always to guard against the same difficulty with all my European vegetables, especially in July, or at other times, when five or six days without a drop of rain would come in succession, and I only saved my young sprouts by having water brought twice a day by the women in their great pitchers. Worms did a vast amount of mischief amongst the germinating seeds, and no devastator was more destructive than the great millipede (*Spirostreptus*), which, as long and thick as my finger, penetrated the soil in every direction. The havoc made in this way amongst the beans before they were set was very considerable.

The hard, yet fertile soil, I feel certain, is quite suited for our cucumbers, cabbage, turnip-cabbage, and radishes. Of radishes, the European sort succeeds better than the Egyptian, which belongs to quite an anomalous variety. Melons and water-melons can only be ripened during the winter months, when they are artificially protected and supplied

with moisture. Any attempt to grow them in the rainy season always results in failure; either the fruit is eaten by worms long before it is mature, or the leaves are devoured by grubs. Here, too, I trained some tomatoes and sunflowers, which ever since have been quite naturalised in this part of Africa. Had my sojourn been longer, I should have made an attempt at establishing the plantain, of which indeed I saw some isolated plants now and then in the Seriba. This is a natural production of the land of the Niam-niam; it would doubtless thrive here, but the indolence of the Nubians is so great, and their indifference towards all produce that must be gained by toil is so indomitable, that garden culture amongst them remains fitful and unprogressive.

When I had seen all the labours of the kitchen-garden complete, I was free to abandon myself to the full delights of the flora. Up with the sun, I used to take one or two of my people with me to carry my portfolios and my arms, and in the safe proximity of the Seriba I explored the woods for hours together, returning about noon with a whole treasury of floral wealth. My table at meals never failed to be well supplied, and I was treated as bountifully as in Africa I could be. I enjoyed sitting in the shade of some spreading tree, while I proceeded to analyse, to classify, and to register, the various novelties which I was perpetually finding. Later in the day I was in the habit of wandering out alone over the plains, whilst my servants at home busied themselves in renewing the paper for my *hortus siccus*, and in pressing out the plants afresh. This labour of the day was often carried on till quite late at night: it was repeated so often that my collection increased to a very considerable extent; roll was piled up after roll; everything most carefully stitched up in hides ready to go along with me on my farther journey, and to be carried across deserts and seas until they could finally be deposited in the magazines of science.

One of these rambles into the woods led to a singular

hunting adventure, which could only occur in Central Africa. I had been sitting crouched up for half an hour or more under the shade of a butter-tree, in the midst of some tall grass, and, engaged in the dissection of my plants, I had quite forgotten where I was. My three attendants were enjoying, as they were accustomed, a peaceful doze; stillness reigned so supreme in the solitude that one could almost hear the tread of every emmet on the soil, as backwards and forwards it hurried to the laboratory within its hill. All at once a huge shadow came in sight, and looking up I saw, just within pistol-range, the great form of a buck antelope. I was struck as much with admiration as with surprise: the creature had seemed to come suddenly from the earth. My heart fluttered at the apparition, but I could not be otherwise than sensible of its beauty. It was a specimen of the bastard gems-bok (*Antilope leucophæa*). Except on the belly, which was white, its long hair was all of a brownish grey. It carried its head erect; its ears were long and pointed; its horns massive and very long; its black legs going off into white fetlocks. A stiff mane of bright brown crested its curved neck, and reached to its withers. It had a tail like the giraffe, with which it wisped off the flies—a tuft of hair of about nine inches in length appended to a long slim stem. There it stood, majestically, I might say, like a stately buffalo when it surveys the region all around before it trusts itself to feed. There it stood, in an attitude at once commanding and defiant. Whenever it moved the grass crackled beneath its tread, and ere long it shifted its place again and turned its full face towards me. I cautiously reached out my hand for a rifle that was lying near me, pushed back the guard, and, at the next movement of the beast, hit it with a ball right upon the shoulder-blade from a distance of about twenty paces. The creature reared itself up, then paused an instant, staggered, and let its head sink down as if amazed. I was just about to get hold of a second rifle when there came

a sudden crash, and, while I was still sitting, the animal had fallen just beyond the open portfolio which was lying outspread before me. Fortune had thus cast the noble prey right into my clutches.

Central African Bastard Gemsbok (*Antilope leucophæa*).

The sound of the rifle had hardly aroused my people, for this is a country where a stray shot does not attract attention for an instant; but my shout of surprise and delight brought them quickly to their feet. Some negroes were soon fetched from the neighbouring huts, who quickly completed the work of flaying and jointing the prey. Its head alone weighed 35 pounds. The natives informed me that the Mahnya (as the Bongo call this species of antelope) are among the rarest animals of the district, although they live as much in one quarter as another. They are ordinarily found singly and far separate from any other of their kindred race; and it is said that the largest of them will assail a huntsman, and are as furious when angry as a wild buffalo.

For a long time I was sorely depressed by the loss of my trusty Arslan, who had been with me ever since I left Berlin and had reached the remote wilderness. He had

accompanied me through all the hardships of travel; and here I hoped that all dangers were passed, and now that the heat of the desert and the privations of water had been overcome, I had no fear of losing him; but he sank a victim to the treachery of the climate. My dog had seemed to me almost the last link that bound me to my home, and when I lost him I felt as though a bridge had been broken down which connected me with my native soil. It would have been a grief to me to lose my dog anywhere, but to lose him here was doubly sorrowful—here, amongst circumstances where he more than ever replaced the lack of a friend.

Nature, pure and free, must ever be a great consoler amidst all the disappointments of life. The stillness and peace of the plant-world brought ease to my troubled mind. To that world, as I turned then, I may be permitted to return now.

Nothing could more completely witness to the great variety of vegetation in my immediate neighbourhood than the fact that during my residence of five months I made a collection of almost 700 flowering plants, which I duly classified. It would not be possible in Europe during a whole year to gather so large a number if one were limited to the environs of a single town. From my own experience I am satisfied that, notwithstanding all means of intercommunication, it would be beyond the power of a botanist to secure anything like 500 species in an entire season. This would arise very much from his having to change his position, and from the varying time at which plants come into bloom: but here, in the land of the Dyoor and the Bongo, Flora seems to delight in crowding all her profusion upon the earlier months of the rainy period: the autumn is left comparatively barren, and even at the height of the rains there is little to be found which was not already in perfection some time before.

The land itself seems decidedly less varied than in the most uniform districts of Germany. Woods indeed there are, and steppes; there are low grassy pastures and shrubby thickets; there are fields and coppices; there are marshes and pools; there are bare rocky flats, and occasionally a rocky declivity; very rarely, and only in the dry, out-drained river-beds, are sands to be met with; and from these ordinary characteristics there is little or no deviation.

The features of the woodlands are, however, very diversified. There are trees which run up to a height varying from 30 to 40 feet, and these alternate with dwarf shrubs and compact underwood. Many of the fields are marked by single trees, which stand quite apart; and which have been intentionally preserved by the natives because of their edible fruit. In some places there are low-lying grassy flats, which in the rainy months are quite impassable, because the grass grows taller than a man; whilst in others the grass is stunted, because there is but a thin layer of soil to cover the rock below, and consequently vegetation is comparatively weak. As to the pasture-lands, they seem to be interrupted every here and there with bushy and impenetrable thickets, which are either grouped around some isolated trees or luxuriate about some high white ant-hill. In the shade of these are found the splendid bulbs of the Hæmanthus, Gloriosa, Clorophytum, together with Aroideæ, ground-orchids, and the wonderful Kosaria. Upon the drier spots within the forests, or where the clay-soil happens to be mixed with sand, weeds and herbaceous plants are found which recall the flora of the northern steppes. Amongst these are the Cappariderae, which (existing as they do in the south of Nubia) make good their claim to be a bond of union between the two zones. Pressing further into the thickets which are formed in the forests, we come across great trees so thickly bound by the wonderful foliage of the large creeper Carpodinus, that a ray of sunlight can

never pass them. Here, too, are wild vines of many a kind, the festoons of which are further burdened as they hang by Dioscoriæ and Asclepiads.

Kosaria palmata.

Many are the comparisons that might be made by way of analogy between the numerous trees of this delightfully wooded district and those of our own home. Some of the trees at first sight have a considerable likeness to our common oaks: amongst these may be named both the Terminalia and the butter-tree (*Bassia* or *Buterospermum*). The fruit of the latter consists of a globular oily kernel, which looks something like a horse-chestnut, and which is as large as a good-sized apricot, and is enveloped in a green rind. This envelope can be kept till it is as enjoyable as a medlar, and is considered one of the chief fruits of the country. From the kernels of this widely-known tree an oil is expressed, which, under the name of "butter of Galam,"

is a recognised article of commerce in Gambia; it has an unpleasant flavour, which makes it not at all a desirable adjunct to the table, and so, for us, it has but an insignificant value; its most valuable property is that, at a temperature of 68° Fahr., it becomes as solid as tallow. The tree itself is very handsome, having a bark which is regularly marked by polygonal rifts in its surface, and which permits it to be likened to an oak.

A very common tree, which bears a somewhat striking resemblance to our white beech, is the small-leaved Anogeissus. Nut-trees are here replaced by Kigelia and Odina. Far spread as are trees of the character of our oak, so too we may say are trees which have the look of a horse-chestnut. Of this kind is the *Vitex Cienkowskii*, with others of the species, of which the sweet olive-shaped fruit is gathered as assiduously by the natives as by the wart-hogs, who relish it exceedingly. Another favourite fruit is the produce of the *Diospyros mespiliformis*. The plane-tree may here be said to be represented, equally with respect to its bark, its foliage, and the pattern of its leaves, by the splendid *Sterculia tomentosa*, which has established itself pretty generally throughout Tropical Africa. In the place of willows Africa offers the Anaphrenium; and over and over again the traveller may fancy that he sees the graceful locust-tree. The Parkia is another of those imposing trees which are met with; the leaves of this are not unlike the Poinciana, which is known also as the Poincillade or Flamboyer: its flowers are a fiery red with long stamens, and hang in a tuft; when they die off they leave a whole bundle of pods, a foot in length, in which the seeds are found covered with a yellow dust. The Bongo, as indeed do the Peulhs of Footah Dyalon in West Africa, mix this mealy dust with their flour, and seem to enjoy it, but it needs an African palate to conquer the repulsiveness of this preparation.

Many types of vegetation, however, abound, to which we

are altogether unaccustomed, and can exhibit nothing which appears to correspond. It is not only by the exuberance and dignity of their forms that these are marked, but still more by the novelty and grace with which Nature seems to have invested them. No European production in any way represents the *Anona senegalensis*, with its large blue-green leaf and its small fruit. This fruit contains an aromatic dark red pulp, and in a modest degree it displays something of that captivating quality which has exalted its kindred plant, the Cherimoyer of Peru, to its high repute as the queen of fruits. It must be owned, however, that it is difficult to secure a well-developed example of this fruit, for so keenly is it spied out and devoured by the birds that often for months together it may be sought in vain.

Much more singular is the magnificent candelabra-euphorbia, which follows the pattern of its prototype, the American cactus. Palms are not frequent enough to play any important part in the scenery, or to demand any particular specification. Groups of the Borassus are observed near the river-banks, and the *Phœnix spinosa*, the original of the date-palm, grows upon the marshes of the steppe. Next must be mentioned the varieties of fig-trees, with their leathery leaves, and, associated with them, those chief characteristics of African vegetation, the Combreta and the Rubiaceæ; tamarinds with their thick tubular corollas, and shrubby Gardeniæ, dwarf and contorted. It was the southern limit of the acacias of the White Nile; and only in isolated cases was the stem of the Balanites to be seen, lingering, as it were, on the steppes of Nubia. Even the tamarind had become scarce, and farther south I did not meet with it at all.

In its general character the flora of this district seems to conform very much to what has been discovered on the table-land of Western Africa, of which the lower terraces form a narrow belt along the shore, and are distinguished

for the wild luxuriance with which the African primeval forest seeks to rival the splendour of Brazilian nature. In contrast to this, the bush-forests in the higher parts of Tropical Africa, broken by the steppes, present in uniformity perhaps the most extensive district that could be pointed out in the whole geography of vegetation. Extending, as it does, from Senegal to the Zambesi, and from Abyssinia to Benguela, Tropical Africa may be asserted to be without any perceptible alternation in character, but that which is offered by the double aspect of steppe and bush on the one hand, and by primeval forest in the American sense on the other. On the west this is illustrated by the marked difference between the table-lands and the low coast-terraces, whilst in the interior it is exhibited by the distinction between the woods on the river banks and the flats lying between the river courses. Here, in the country of the Bongo and Dyoor, this, which may be designated as a duality, almost completely fails, on account of the small supply of water in the rivers and brooks; but in the land of the Niam-niam it is again very striking.

Limited as have been the botanical collections of the few who have explored this immense region, they are still sufficient to justify us in estimating the relative abundance of species. When the collections from Java and Brazil are compared with those of Tropical Africa, it is certain that the plants of Africa are not altogether half so numerous.

It is not in the least below the most abundant tropical districts of the New World in producing timber trees. Trees and shrubs constitute quite a fifth of the entire production, and in the woods of the Bongo the variety of foliage is everywhere astonishing. Any tracts covered by a single species are altogether rare, and would exist only within the most limited range. This uniformity of Tropical Africa in comparison with the enormous space which it occupies, and the striking want of provinces in the geography of its plants

which it displays, are the results of several agencies. On the one hand, it arises from the massive and compact form of the whole; and on the other hand, by an external girdle which keeps it shut up, so that it is not penetrated by foreign types of vegetation. This girdle is made by currents of the sea and long tracts of desert (the Sahara and Kalahari), and encircles it entirely. In the direction towards Arabia there is, as it were, a bridge into the regions of India, and, indeed, the Indian flora has a great share in the characteristics of its vegetation. The greater number of the African cultivated plants, as well as nearly all their associated weeds, have been, beyond a doubt, derived from India—a conjecture, equivalent to a prophecy, which Rob. Brown had formed at a time when little was known of the vegetation of Central Africa.

Already have I expressed my happiness at having thus reached the object of my cherished hopes—my satisfaction at thus finding life to be with me an idyll of African nature. My health was unimpaired, and never before had I been less hindered in prosecuting my pursuits. I felt alone in the temple of creation. The people around me were somewhat embarrassing. Their wickedness, with its attendant impurity, stood out in sad contrast to the purity of nature; but it did not much disturb the inner repose of this still life. In sickness everything is sad, and the craving for home is not to be suppressed; but whoever, in the robustness of health, can imbibe the fresh animation of the wilderness, will find that it stamps something of its unchanging verdure upon his memory; his imagination will elevate it to a paradise, and the days spent there will enrol themselves among the very happiest of his life.

One day in June there came back to the Seriba a company which had been sent out by the agent to fetch the ivory which had been stored in one of the minor Seribas of Ghattas on the Rohl, 130 miles away to the south-west. The proper place of embarkation for the Seribas on the Rohl, which are

under a separate agent, is the Meshera Aboo-kooka, on the Bahr-el-Gebel, which is nearer than the Gazelle; but during this year the natives were animated by such a hostile spirit, that the shorter route was impracticable, and thus it was necessary to proceed to the banks of the Gazelle. In April the chief Seriba in this territory had been abandoned by the few men who had been left, after nearly all their entire garrison of a hundred men had been killed during a raid against the Dinka tribe of the Agar. The remnant, who had been informed of the calamity by some friendly natives, found themselves in a great strait. They could see no prospect of defending themselves, and were compelled to surrender all their stores and ammunition, and to escape under cover of night to one of the dependent Seribas. The main body of the troops were still out on an expedition to the Niam-niam country, and it was only the fear of their sudden return which deterred the Agar from annihilating the very last of their foes. They plundered and burnt down the Seriba, which has never since been restored. It was formerly the property of the brothers Poncet, although they were never known to visit it. Petherick halted at it whilst he was on his desperate march to Gondokoro, and inserted it upon his map under the name of Adael. Bad tidings travel quickly, and so it chanced that the intelligence of this disaster reached Khartoom before my letters; the details were related very indistinctly, and my friends were for a while under some apprehension about my fate.

In another respect a star of ill-luck seemed this year to have risen over the enterprise of the company of Ghattas. The season had drawn near in which the agents usually commenced their annual depredations in the districts of the Dinka to replenish their stock of cattle. As the various associations were entering upon mutual competition, in order to prevent disagreements, there was laid down a kind of Seriba law, which was pretty well the same everywhere.

First of all, the territories immediately dependent were distinctly designated. Then it provided that the approaches to a meshera should only be used by those who could establish a claim to it. Nearly every Seriba has its separate avenues, upon which it levies a toll, and an avenue without tolls is not a legitimate highway at all. If any extraordinary companies desire to make use of these roads, they must first come to terms with the Seriba agents, who have the supervision of the right of way. Even chieftains who supply provisions to those who are on their transit, would be sure to attack them as foes if they were not first conciliated by being appointed as guides and dragomen.

Very similar was the arrangement that regulated all the expeditions which were undertaken against the Niam-niam. Each separate company had its own route and its own train of captains, who purchased the ivory and procured a market. No new-comers were allowed to intrude themselves into an established market, or to infringe upon its trade. Fresh marts could only be established by pressing farther onwards into the interior. These new establishments in their turn were subject to monopoly, and were rigidly protected. Wherever any violation of this rule occurred, there would be very serious conflicts—so much so, that amongst the Nubians the affray was very often fatal. This, however, would only happen while the contest was limited between one negro and another, for true Nubians at once renounce all allegiance to a leader who presumed to shoot a brother Nubian.

The Khartoom companies are most jealous of all their rights of cattle-plunder, alike in this region and in every other. The district over which the incursions of Ghattas ranged embraced the whole of the lower course of the river Tondy. During the previous year it was said that the total of the booty was no less than 800 oxen; but this year, although the aggressions were thrice renewed, the result was altogether a failure, and was quite a derision amongst the

neighbours, being barely forty head of cattle. In vain had they explored the country west of the Tondy; to no purpose had they scoured the territories alike of the Rek and of the Lao; everywhere they were just too late. The Dinka had got intelligence betimes, and off they packed their herds and families to the inaccessible marshes. Their mere superiority in numbers here gave them the advantage, and they could hold their own against considerable troops of armed marauders. The whole Dinka tribe amongst them could hardly boast a single musket which could go off properly. Other companies, which had been more fortunate in plunder, were now ready to avail themselves of the opportunity to dispose of their superfluous cattle in barter for what the country afforded. Sometimes it might be for slaves, or for copper-rings, or sometimes (and this was a very favourite method) for bills of exchange upon Khartoom. Thus those who lived upon robbery were glad mutually to make a market of each other.

The mode of carrying out these raids may be thus exemplified: On the last occasion 140 armed troops, accompanied by a recognised train of some hundred natives, followed again by a lot of people with a keen scent for cattle of any sort, had set out upon their enterprise. In this cavalcade they had proceeded exactly as though their intention was merely to reach some Seriba or other. Then, all of a sudden, when they saw that the chances were in their favour, just at nightfall (deviating to one side, or even retracing their steps), they marched on till, generally at break of day, they arrived at the devoted murah. Having surrounded it, they began to beat their gongs and to fire away vigorously. They were so alarmed at the likelihood of hitting each other in the legs (for that is the general result of their firing) that they merely discharged a lot of blank cartridges into the air. This, however, was quite sufficient to intimidate the natives, who lost no time in making their escape through the gaps which the

invading party were careful to provide in their ranks. In a general way the Dinka have no larger number of servants with them at their cattle-farms than is absolutely necessary, and, as I have mentioned, they leave their wives and children in outlying huts, so that these are very rarely exposed to the rapine of the invaders.

By the help of the negroes which they bring with them, the invaders soon make themselves masters of all the herds, and hurry back covered by the protection of the soldiers. To supply the requirements of a year it is necessary that they should secure by their raid at least 2000 head of oxen. Of the plundered property two-thirds belong to the authorities, the remaining third being assigned to the soldiers, who hawk it about and dispose of it as they please. A portion, however, is first allotted to the leaders of the negroes, to the overseers of the districts, and to the chiefs, which is ever an excuse for great rejoicing. The scandalous accomplices, abettors, and receivers of this odious commerce are those professed slave-traders, the Gellahba, who have succeeded in finding snug quarters for themselves in every Scriba, where they manage, like idle drones, to enjoy the produce of the toil of the industrious. Their transactions extend to calicoes, soaps, and head-gear; they deal in firelocks, looking-glasses, and onions; they can sell a few slaves, old or young, male or female; they find a market for rings and beads; they do something in amulets and verses of the Koran; very often they have on hand some bullocks, sheep, or goats; indeed there is hardly anything which chance does not occasionally throw into their line of business. Thus it came to pass that this year they carried on a thriving cattle-trade in our settlement. From the other marauding companies, whose luck had been better, they had acquired a considerable store of cattle, and they did not miss the opportunity of turning it now to their own advantage.

When I consider the ravages that are made year after

year on so large a scale upon the cattle of the Dinka, and the enormous consumption of the Nubians, I confess that it is quite an enigma to me how the supply is not exhausted. Although I am aware that they never kill their cattle, yet the murrain of flies every season decimates their herds; and, besides this, their cows very seldom ever calve more than once, and very frequently remain utterly barren. Observations of this kind somewhat assist us in forming an estimate of the vast numbers of the people, since for the mere oversight and custody of the myriads of cattle there must be multitudes of men corresponding to the hand-to-mouth population of our civilised communities.

From the 21st of July until the 4th of August I made a tour, which gave me an opportunity of inspecting the subsidiary Seribas of Ghattas. My acquaintance with the country was thus materially enlarged. A march of about four leagues towards the south-west brought me again, by a road which I had not hitherto traversed, to Geer, where the fields of sesame were already in bloom. The sesame in this district all had white blossoms, while in the Nile country it as uniformly blooms with a pale rose-coloured flower, and this is by no means an uncommon feature in the flora of the region. I could exhibit a long list of plants which elsewhere are either red or blue, but here are invariably white; but I could not offer any satisfactory explanation of the circumstance.

Like all my other wanderings in the interior, this little excursion was made entirely on foot. To get along through the tall grass was anything but easy. The negroes tread down a sort of gutter, the width of their foot, and along these we made our way, as in a wheel-rut, as best we could. It was quite necessary to keep one's steps verging inwards. Occasionally these gutters change their character and become water-courses, by means of which the adjacent steppes are drained. But the enjoyment of a luxuriant nature, with its perpetual change of scene, and the charms of novelty which

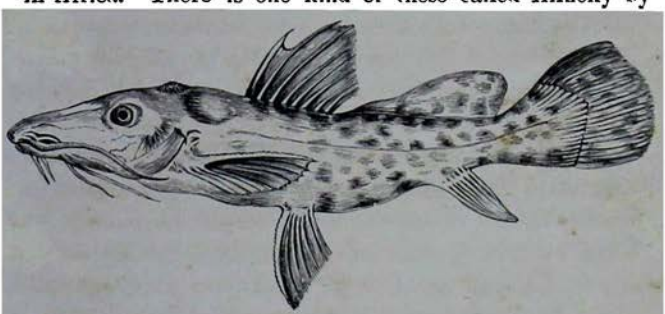
presented themselves in the foliage, compensated richly for a little toil; and day by day practice made the trouble lighter.

This tour contributed in various ways to my stock of information. In Geer I met with the clerk from the Seriba destroyed by the Agar, who related to me the adventures which the sufferers had endured upon their flight. With a Faki from Darfoor, who had formerly visited Bornu and the Western Soudan, I had a long geographical dispute as to whether the great river of the Monbuttoo emptied itself into the Tsad, or flowed direct into the sea. The foreigner argued justly for the Shary, whilst I, on the other hand, was referring to the Benwe. I succeeded in stirring him and all the other interested listeners to a state of considerable amazement at my acquaintance with localities of which they had no knowledge except by report and which they hardly knew even by name. I told them about the whole series of states right away from Darfoor to the ocean. For about the hundredth time I had again to answer the inquiry why Europeans want so much ivory. The curiosity on their part is quite intelligible, as ivory is the unseen incentive which keeps alive the system of plunder practised by the Nubians, and I endeavoured to make them comprehend something about the handles of knives and sticks and parasols, the pianoforte keys, the billiard-balls, and the variety of other uses to which the material is applied.

From Geer, with its questions of geography, history, and political economy, I proceeded another league and a half, and came to Addai, where the whole armed force was employing itself most peaceably in the art of tailoring. In nearly all Mohammedan countries needlework is the business of the men. A short league brought me to Koolongo, past which there flows a copious stream, bordered by thick jungles of impenetrable bamboos, and which, not far from Addai, flows into the Tondy. The stream is singularly abundant in fish, and the Bongo were busy in securing their chief haul.

They proceed very much in the European way of damming up the stream by weirs, and laying down wicker-pots of considerable size. The fishing, for the most part, is done twice in the year; first, at the commencement of the rainy season, and again when the waters begin to subside.

A large proportion of the fish captured in this stream is nearly the same as what is found in the Lower Nile and in Egypt; but some sorts are found which are peculiar; amongst which the fish-salamander (*Lepidosiren*) and some Siluridæ may be mentioned as representatives of the tropics in Africa. There is one kind of these called Kilnoky by

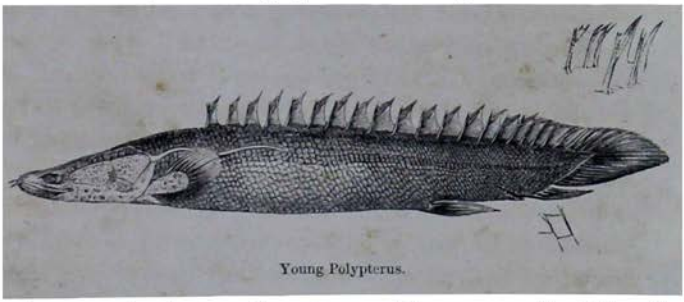


The Kilnoky.

the Bongo, and which is rather interesting. It reminds one of the species of the Auchenipterus or Synodontis, which are distinguished by their forked tail-fins. Another of the most frequent fish is that known as the "Besher" of the Nile, here called "Gurr" by the natives.* The elegant, large-scaled *Heterotis niloticus*, which the Bongo style the "Goggoh," has a tender flesh and is of a good flavour. The river does not generally abound with fish which are desirable for food, but those which can be eaten generally belong to the section of the Characini; for example, the *Hydrocyon Forskalii*,

* The illustration on the following page represents a young fish, about nine inches long, and is remarkable for the long, thread-like spikes of skin on the lids of the gills. This peculiarity has been observed in Senegal, and probably is only seen whilst the fish is young.

which is here called "Kyalo." This is a grey-streaked fish, glittering like pearl, in shape not unlike a salmon; it has red fins and a regular dog's head, of which the lanky jaws, armed with conical teeth, amply justify the systematic name. Related to this is the "Raha" (*Ichtyborus microlepis*), which is noteworthy for its pike's head, and the small-scaled *Distichodus rostratus*, or "Heeloo," as it is termed. There is another sort which the Bongo call "Tonga." Besides these there are the "Kalo" (*Alestis*) and the "Dologoh" (*Citharinus*). Of the perch, which plays so prominent a part in these waters, the silver-grey *Lates niloticus*, known as "Golo,"



Young Polypterus.

is very abundant, and perhaps still more so the "Warr" (*Chromis*), about the length of a finger, and of which there are several descriptions. The "Warr," when first caught, is of a dark-green tint crossed obliquely by a number of broad dark stripes. The most common, however, of all the fish, and which seems never to fail in any of the marshes left by the retreating floods, are the sheath-fish, which belong to the Clarias species, the white flesh of which has a detestable flavour of the swamps; and the "Geegongoh," which while they are alive are so like in colour to the brown slime in which they roll that they cannot be distinguished from it. A rare sort of the smaller fish is that known as the "Banghey," and which belongs to the species of the Schilbe. Interesting, as being a representative in Africa of an Indian species, is the speckled grey and brown *Ophiocephalus obscurus*. It only remains to mention among the lesser sorts

"Ndeer" (*Ctenopoma Petherickii*), the "Labyrinthi" of the Marango (*Labeo Forskalii*), and the "Möll" (*Mormyrus cyprinoides*).

There are two methods which the Bongo employ to preserve the flesh of their fish. Table salt they cannot get, but they substitute what they obtain from ashes. They cut the fish through lengthways, simply expose it to be dried in the sun, and afterwards hang it up to be fumigated in the clouds of smoke which fill their huts. Another way is to cut the fish up and dry it, and then to pound it all up in mortars until it is reduced to a jelly, which is rolled into balls about the size of the fist. These, with their high flavour, form a favourite ingredient in soups and sauces, which are entirely wanting in all other aromatic condiments.

In Kulongo so many ridiculous tales were dressed up for me about the wonders of the subterranean world, and of the abodes of evil spirits in the neighbouring caves, that I glowed with the desire to make their acquaintance. No one that I could find in the Seriba had ever ventured to visit the dreaded grottoes, and the alarm of the Governor was a great joke; after he had talked away for an hour, and declared he would accompany me, he ended by offering a handsome "backsheesh" to one of his subordinates to take his place; but his offer to go had been publicly made, and, as matter of honour, he was bound to attend me. We had to cross a stream ten feet in depth, and as, on account of an injury to his foot, he was riding an ass, the timid fellow found just the pretext he wanted to excuse his return; he could not allow his invaluable donkey to get a chill. In a party of eight, including myself, we set out towards the house of terror: three of my own servants, two of the *soi-disant* soldiers, and two of the natives who acted as guides. This company, however, could not help considering themselves inadequate to face the peril, and as we approached the caves some extra negroes from the adjacent fields were pressed into the service.

Uphill for a while was our way from Kulongo, and on accomplishing the ascent we had before us a wide plain, and about a league away we could discern the spot, shrouded in a thick coppice, which was the object of our march. Reaching the entrance to the cavern, we found it blocked up through a considerable fall of earth, which apparently had been caused by the washing away of the surface soil by springs bubbling up from beneath; and the outside was so choked up by masses of underwood, that no one could suspect that there was a grotto in the rear.

When, fourteen or fifteen years previously, the first intruders made their way into this district, the story goes that hundreds of the natives, with their wives and children and all their goods and chattels, betook themselves to this inaccessible retreat; and that having died of starvation, their evil spirits survive and render their place of refuge a place of danger. Just as we had contrived to push a little way into the thicket, an idea struck one of my servants that he could be as cunning as his master. Finding that I persevered in my intention, he bethought himself of the bees on the White Nile, and so there rose the shout of "Bees, bees!" from more than one of the party. But they got some stings they hardly looked for: one good box on the ear, followed up by another and another, made their cheeks tingle again, and they were fain to proceed. I can still laugh as I picture to myself those nigger rascals resigning themselves to enter the shrubs, and I see them heaving a sigh, and looking as if they were ready to send their lances through the first devil they should happen to meet. I followed them on through the hazardous pathway, the darkness growing ever deeper. Stumbling on, we made our way over blocks of stone, descending for more than a hundred feet till we reached the entrance of the cave, which, after a low kind of porchway through the rifled rocks, arches itself into a spacious grotto, capable of sheltering some thousand men.

In place of any heart-rending shrieks of wicked ghosts,

there was nothing more to alarm us than the whizzing of countless bats (*Phyllorhina caffra*), and thus at once the whole veil of romance was torn asunder. We reclined for a time in the cool shade, and then I invited the whole party to take part in a scene of conjuration, for which they were quite prepared. With the full strength of my voice I cried, "Samiel, Samiel, Afreed!" invoking the spirits of evil to put in an appearance; thus all pretext of fear from that quarter was put to rest; and now belief in ghosts took another shape, and the men pretended that they were terrified, because the cave was a lurking-place of lions; but as a fine brown dust covered the floor of the grotto, leaving it as smooth as though it had just been raked over, I asked them to show me some traces of the lions. They could detect nothing, however, but the vestiges of some porcupines, of which a few quills made it clear that other creatures besides ghosts and bats made the cave their home. That brown dust was a vast mass of guano that had gradually accumulated; I brought away a sack of it with me, and it worked wonders in making my garden productive, resulting in some cabbages of giant growth.

The rocky walls of the cave, dripping as they were with moisture, were covered with thick clusters of moss, which took the most variegated forms, and were quite a surprise in this region of Central Africa, where mosses are very scarce. A regular network of foliage, with long creepers and thorny brambles, filled up the entire glen upon which the grotto opened, so that no ray of sunlight could ever penetrate.

The Bongo give the name of "Gubbehee" (or the subterranean) to this cavern. I tried to creep into some of the crevices, but was soon obliged to desist, sometimes because the fissures were too narrow, and sometimes because the multitudes of bats came flying out in my face, and sometimes because the reeking ammonia choked me, and made further progress impossible. By some shots, however, which I discharged, I convinced myself of the magnitude of these rifts, which, within a few inches, were full of guano.

Full of spirits, we retraced our steps to the Seriba, and had some sport with the Governor about his pretence of the susceptibility of his donkey. When I asked him to accept a bet of100 dollars that he would pass a night by himself in the cave, he was quite as bumptious as on the day before; but I moderated his enthusiasm by suggesting that his donkey, perhaps, was worth more than the 100 dollars, and that I was sure that the donkey could not stand the damp. The result was, that he declined the engagement, and cried off the wager.

These details will answer the purpose of showing what kind of heroes these cattle-stealers and men-hunters are. To them most literally applies Dante's verse, when he speaks of the saucy herds who, "behind the fugitives swell with rage, but let these show their teeth, or even stretch out their purse, and at once they are gentle as a lamb." Against the poor faint-hearted negroes they were valiant and full of pluck; but all their courage vanished into nothing when they came in contact with the Shillooks and Bari.

In Kulongo were wide plains covered with earth-nuts, which attract multitudes of the jackals of the country, which scratch up the nuts, and crack them with their teeth. The jackal (the "bashohm" of the Nubians, *Canis variegatus*) is one of the most common animals in Bongo-land. It is about the size of an ordinary fox, in colour being like a wolf, with black back and tail. They are pretty sure to be seen in the early morning, squatting comfortably down, and composedly enjoying the nuts. I knocked over several of them with heavy shot, and took care of their skins, which gave me some beautiful fur. The bashohm is very destructive among the poultry of the villages, doing even more mischief than the wild cat, which does not care to venture so near the huts.

From Kulongo I returned to Geer, from which it is distant about as far as from Addai. Half a league on the way we came to a spot where a deserted Seriba of Ghattas's exhibited its desolate remains. The sight here was very striking; after penetrating the tall masses of grass, we found

some self-sown sorghum, the stalks of which reached the astonishing length of 20 feet, being beyond question the tallest cereal in the world. The extraordinary growth was probably to be attributed to the manuring substances which, year after year, collect upon and fertilise the soil. The palisades of the old Seriba were still partially standing, and were hardly higher than the surrounding grass, and the ruins were overgrown with wild gourds, calabashes, and cucumbers. The bare frameworks of the conical roofs had fallen to the ground, and lay like huge crinolines: they served as supports to the growing pumpkins, and formed in this condition a thick shady bower.

The extensive wilderness derived a weird aspect from the strange stillness that pervaded the deserted dwellings. There was not a song from a bird, there was hardly the humming of an insect; it seemed as if Nature were revelling in her undisputed sway, or as if the curse of a prophet had been wreaked upon the abodes of violence and of plunder.

By the end of July all the bamboos were in full blossom. The grains are not unlike rye, and are edible, and, in times of dearth, have been known to form a substitute for the exhausted corn. When the fruit is mature, the long, ramified panicles have a very remarkable appearance, and the ears, clustered together at their base, radiate like an ancient whirlbat. Very rarely, however, does the African bamboo bloom, so that it is not often that it supplies the place of ordinary corn.

At an equal distance of about a league and a half from Kulongo and from Geer lies the village of Gurfala. The way thither led through perpetual marshes and was so interrupted by deep masses of mud that I had repeatedly to change my clothes. When the naked skin is exposed to the filth of the bogs, it is not only annoyed by a number of insects, some of them harmless enough, many of them most disgusting, but it is terribly cut by the sharp edges of the grass. This not merely causes considerable pain, but the

wounds inflicted in this way are often very troublesome and slow to heal; they not unfrequently result among the Nubians in serious sores, and have been known to entail the loss of a foot. At every Seriba there will be found some who are suffering from this cause, and Baker observed the recurrence of the same evil amongst his people. As the same consequences do not occur in Nubia itself they are probably to be attributed to the effect of the climate. The backs of the negroes are not available for transport over any long distances of this fenny land, because of the insecurity of the footing; and in another respect this mode of conveyance offers little attraction; to mount one of the negroes is almost as disastrous to one's white summer garments as an actual tumble into the marsh. Soap is not a common article hereabout, and must be used economically, and the traveller has to put up with a general wash about once in two months.

All the minor Seribas are really established for the purpose of overlooking the Bongo, and the sub-agents are always in trepidation lest there should be a sudden disappearance of all their negroes. It has not unfrequently happened that whole communities of the Bongo, quite unawares, have taken up their baggage, started off from their state of subjection, and, escaping the hands of their masters, have established themselves amongst the neighbouring Dinka. If they wish to cultivate corn for themselves, who could venture to blame them?

The Bongo name for Gurfala is Ngulfala, which indicates an earlier tribe of this race, which is no longer separated into various clans. Gurfala, I found, had its amusing associations. As in Kulongo it was the fear of ghosts for which the people had been conspicuous, so here it was the effect of a great brandy-distillery upon the inhabitants that entertained me. This distillery was kept by an old Egyptian, one of the few of his race who resided in the district of the Seribas. Out of an "ardeb," or about five bushels of sorghum, he managed,

with his rude apparatus, to extract about thirty bottles of watery alcohol. The sallow old Egyptian, whom the enjoyment of his vile liquors had tanned till his skin was as dry as parchment, was, as it were, director of a joint-stock company, of which the sub-agents and the soldiers in the Seriba were the shareholders, contributing their quota of corn to the concern. The apparatus for distilling consisted of a series of covered clay retorts, connected by tubes made of bamboo; the establishment for working was made up of a party of fat-bellied, swarthy women slaves, who had to pound away at the grain in a mortar; and as often as they paused for a moment to recover their breath, after their grinding exertions, they invariably panted till they reminded one of exhausted Cybeles. The chief material used was sorghum; the produce was a vile spirit. All the Nubians who settle here would abandon themselves very much to the use of brandy, if it could be more readily procured and if a continual superabundance were at their disposal; their fanaticism, however, is irreproachable; they rigorously follow the prescription of their law, and most scrupulously observe the Fast of Ramadan.

Together with the fresh relays arrived rows of spirit-flasks in their original packing (mostly made at Breslau), which are stored away in the magazines. These find their way from Alexandria and Khartoom to this remote corner of traffic. The agents drink their spirits neat, and cannot get it strong enough to please them; everybody else dilutes it with two-thirds water or mixes it with his merissa. In their drinking-bouts they used to besiege me with applications for some of the sharp radishes from my garden, which on these occasions they seemed especially to relish. What was most revolting to me about their intoxication was that they always preferred the early hours of the morning for their indulgence, and for the rest of the day became incapable of standing upright. After they were tipsy they were just as pugnacious as Europeans, but the excitability of the South would break out,

so that manslaughter and death were not of unfrequent occurrence.

After a couple of days I took my departure from the huts of Gurfala, where a number of the Gellahba also have settled themselves, and I made my way over a short two leagues towards the west to Doomookoo, the fifth of the Ghattas Seribas. The route was over a firm soil, alternately bush-wood and open steppe. The grass on the rocky level seemed to have a permanent character. All of one kind, and covering large tracts of country, it reminded me of the waving ears of our own cornfields. Although the region seems to be destitute of any continuance of trees, it far surpasses the European plains and meadow lands in the variety of its permanent grasses.

About half-way there was a pond made by rain on the rocky ground, which was covered with the large red-headed geese of the Gambia and a number of widow-buntings. Only during the rainy season do these birds quit the waters of the great Nile and find their way to the interior.

At Doomookoo I found the negroes all astir; an equipment was being made for an expedition to Gebel Higgoo, and, with the co-operation of Aboo Guroon, was to consist of a hundred armed men. Mukhtar, the captain of the troop, repeatedly assured me that he could reach his destination in about five days, and I was much disposed to accompany him. But there was in my way this obstacle, that I was obliged to get my correspondence off-hand; I had to write my letters for a whole year. The mountains Higgoo and Shetatah have been so denominated for some cause by the Nubians; Higgoo signifying a bandbox, and Shetatah being their name for cayenne pepper. They lie in a southerly direction from where we were, only a few leagues distant from that Mundo which is so often mentioned by Petherick; a spot which on every map is notoriously always pushed either backwards or forwards for several degrees, and originally, by those who professed to have visited it, was said to be situated on the

Equator. The fact is, that Mundo is the name ordinarily given by the Bongo to a small tribe calling itself Babuckur, which has contrived to wedge in its position between the borders of the Bongo and the Niam-niam. On the eastern limit the Bongo denote the Niam-niam themselves by this name of Mundo. To the isolated hills of this border-land, such of the Bongo as could maintain their independence made good their retreat, and only in consequence of the contemplated expedition of the Khartoomers were they laid under tribute. During the present year the trading companies had established a number of settlements here amongst them, these advanced colonies being necessary for the security of the highways for traffic into the Niam-niam territory. Hitherto all the avenues for transit had been found liable to attack from the uncontrolled Bongo and from the Babuckur; but now the entire region was sequestered, and made a kind of preserve, on which the two companies could meet and monopolise their slave-plunder.

In one of the more extended low-lying steppes, overgrown with its mass of vegetation, I lost a whole day in vain endeavours to secure an antelope of that large breed which is found here, but which seems to elude all pursuit, in the course of the chase learning to discriminate a considerable number of species. Fate was here unpropitious. Manœuvre as I would, I could not sneak up close enough to get a shot. More than once I saw large herds of Leucotis, grazing apparently in entire repose; but every movement of mine was so dependent upon the formation of the ground, and every disturbance of the tall grass resulted in such a crackling, that to meditate a surprise was out of the question. If ever I flattered myself that I was gaining some advantage, and was getting close to the herd under cover of a detached bush, I was sure to be betrayed by the keen vision and disquietude of some stray beast that was hanging on the flank. Still greater were the obstacles that occurred if pursuit were tried in the drier tracts by the border of the lowlands. Here were

seen whole troops of the Aboo Maaref (*A. nigra*), like great goats, with their sharp horns and their flowing manes, proudly strutting on the plain; but, times without number, on the first alarm they bounded off. No avail that their black wrinkled horns were right before us, rising and sinking in the grass, offering a mark indeed somewhat indefinite; no good that we crept on, three at a time, one taking the wilderness, another the thicket, and the third, step by step,

exertion. Besides this they prefer the very rankest of their goats' flesh to the choicest venison; partly it may be from the general uniformity of their diet, or partly perhaps from their religious aversion to eat of meat slaughtered in a manner that is not prescribed in their law; certainly it is very rare for them, in their wanderings, to partake of any game which they have captured.

There are two little antelopes which are here very common, and which roam about the country in pairs. One of these is the Hegoleh (*A. madoqua*) which appears to be found right through from Abyssinia to the Gambia; the other is the Deloo (*A. grimmia*), which is known also in the south. They are both pretty and lively bright-eyed creatures, of which the entire length is but little over three feet; they correspond very nearly to a small roe, or the fawn of a fallow deer.

The Hegoleh is all of one colour—a light tawny with a greyish throat, not so foxy as the Leucotis. The Deloo is of a fawn colour on its back, with a tinge of yellow in front; its flanks are nearly white, whilst its ankles are black. Its head is very expressive; a black stripe runs along it and terminates in a dark brown tuft; this gives to the female, which has no horns, rather a comical look, running up as it does into a stiff peak of about five inches long: in the males this growth is concealed by the short horns. Both kinds are distinguished by the glands of the lacrymal ducts.* The Madoqua has two pair of these, one pair set under the roots of the ear, making a triangle of an area of half a square inch; the other pair in the tear-pits composing a sort of pouch, about an inch long, which consists of a deep fold of skin, and from which is discharged a viscous and colourless matter. Above the tear-glands, towards the nasal bone, there projects on each side from the frontlet a thick pad about three inches long, which seems to have an adenoid texture, almost like

* The head of the Madoqua is represented as accurately as possible in the accompanying illustration.

a tumour. In the same way as with the Cervicapra, these tear-glands during any excitement open themselves like the nostrils of a snorting horse. The Deloo has only one pair of these glands, which lie horizontally in a narrow streak across

The Madoqua.

the hollow of the eyes. Both kinds are alike in never venturing into the low grounds exposed to floods, and in preferring the rocky lands which are covered with bushwood. They often get into the middle of a thicket, and startle the huntsman by suddenly springing out, in the same way as the Ben-Israel or Om-digdig of Abyssinia (*A. Hemprichiana*). The flesh of both these antelopes is very indifferent for eating as compared with the larger kinds; that of the Deloo when roasted having a singular acrid flavour, which seems to suggest the unpleasantness of the glands.

Towards the end of August the sorghum-harvest commenced with the pulling of the light crop of the four-monthly sort, which had been sown in the latter part of April. But the general ingathering of the heavier varieties, which

contribute chiefly to the supply of corn, did not take place until the beginning of December, after the rainy season was over. In Sennaar and Taka, sorghum requires five or six months to come to maturity, but in this district it rarely takes less than eight months. Both the early and late sorts commonly attain a height of nearly fifteen feet; the stalks

The Deloo.

of the former remain quite green, but the reedy stems of the latter become so strong and woody, that they are used for fences to divide one enclosure from another. Some of the varieties are scarcely inferior to the regular sugar millet (*Sorghum saccharatum*) in producing an abundance of saccharine matter; these are known to the negroes as well as to the Arabians of the Soudan, who chew the straw and so express the juice. The Bongo and the Dyoor express the pulp by means of wooden mortars, and boil it till it has the consistency of syrup. From this concoction I was able to procure a spirit which was far more palatable than what I should have obtained by distilling the sorghum itself.

Both varieties of the common sorghum,* which here

* In all descriptions of sorghum, as given by travellers, there seems to be a considerable confusion with respect to the distinctive names of this ordinary cereal. It is called promiscuously "Kaffir-corn," "negro-cane," "bushel-maize," "Moorish-mille," or sometimes "durra." Durra is an Arabic defini-

abound in all their minor differences of colour, shape, and size of grain, yield well-nigh a dozen different descriptions for the market at Khartoom. The standard value is fixed by the Fatareetah, a pure white thin-skinned grain, which also is grown by the negroes in the Seriba.

All negro races that depend upon agriculture for their subsistence consider the cultivation of sorghum most important. Of the people among which I travelled, the Bongo, the Dyoor, and the Mittoo, were examples of this. On the other hand, among the southern Niam-niam and the Monbuttoo this cereal is quite unknown.

I could not help being astonished at the length of time which most of the kinds take to ripen. In some fields a portion of the stubble is left intentionally ungrubbed until the next season; this will die down, but, after the first rain, it sprouts again from the root, and so a second gathering is made from the same stem. No loosening of the soil is ever made, and this perhaps accounts in a degree for the tardiness of the growth. With the small spades, of which I have already spoken, shallow holes are sunk in the ground at intervals of about a yard: into these is dropped the corn, which then is trodden down by the foot. It is only during the first few months that any labour at all is given to the fields, just to remove from the surface of the soil the multitudes of weeds which will spring up. These weeds are gathered into heaps, and form the only manure which is em-

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tion, which can be traced in literature as far as the tenth century. The etymology of the Italian word *sorgho* is altogether uncertain. Peter de Crescentiis, about the year 1300, is the first author who definitely alludes to corn under this name; whether Pliny meant to refer to it is very doubtful. The Germans in the South Tyrol, who are very limited in their acquaintance with cultivated cereals, call it, in their Germanised way, "Sirch," whilst the Sclavonians corrupt it further into "Sirek." In Egypt this sorghum is called *Durra belladi*, "durra of the country," to distinguish it from maize, which is known as *Durra Shahmi*, or "Syrian durra." In Syria itself, where the sorghum is little known, because rarely cultivated, it is simply called "durra." Throughout the Soudan it has exclusively the appellation of *Aish*, *i. e.* "bread."

ployed in this lavish laboratory of nature. Never more than once is this weeding repeated; it is done by the women and children; and the corn is then left entirely to take its chance until it is time to gather it. On account alike of its tall growth and of its luxuriant habit, the men are careful not to plant it too thickly. The country does not offer many materials for manuring the land; if, therefore, greater application of labour or of skill should succeed in doubling the yield of every stem, there would ultimately be no gain. The soil, which already in many places fails after the second year, would only be exhausted so much the sooner. Such being the case, every project of ameliorating the condition of this people by enlarging their crop is quite an illusion; the land could not sustain a larger number than that which already resides upon it.

In my garden I made several attempts to sow wheat, but without much success. Probably I should have prospered better if I could have obtained some European seed: mine was from Khartoom, and it is very likely that the conditions under which it had been grown, amidst the flooded fields of the Nile Valley, on a soil far more soddened than that of this district, had been very injurious to the grain.

Very unwisely, not one of the Seriba governors has ever made an attempt to introduce into the district the culture of rice, for which the low marshy fields, otherwise useless, seem very admirably adapted; but the people are not to be taught; vain the endeavour to initiate them even into a rational system of burning charcoal; and as to the culture of rice, nothing throughout the whole of Nubia was known about it. On the contrary, the expeditions which have set out from Zanzibar, and which have explored districts where the climate is not dissimilar to that of which we speak, have introduced the cultivation of rice over a very considerable area. The finger of nature itself seems to point out the propriety of not neglecting this product; in the whole district south of the Gazelle the wild rice of Senegal grows quite freely,

and this I always found of a better quality than the best kinds of Damietta. During the rains the wild rice (*Oryza punctata*) environs many a pool with its garland of reddish ears, and seems to thrive exceedingly, but it never occurs to the sluggish natives to gather the produce that is lost in the water; and it is only because the Baggara and some of the inhabitants of Darfoor had saved some quantity, that I contrived to get my small supply.

There yet remain three kinds of corn to which a passing reference should be made in order to complete a general survey of the agriculture of this district.

Next to the sorghum stands the penicillaria, or Arabian "dokhn," to which much attention is devoted, and which is cultivated here much more freely than in the northern Soudan. Sown somewhat later than the sorghum, somewhat later it comes to maturity.

A second substitute on the land for sorghum is a meagre grain, the *Eleusine coracana*. By the Arabians it is called telaboon, and by the Abyssinians tocusso; it is only grown on the poorest soils and where the ground is too wet to admit of any better crop. The grain of this is very small and generally black, and is protected by a hard thick skin; it has a disagreeable taste, and makes only a wretched sort of pap. It yields a yeast that is more fit for brewing than for baking; in fact, not only do the Niam-niam, who are the principal growers of the Eleusine, but the Abyssinians as well, make a regular beer by means of it.

Midway between the sorghum and the penicillaria must be reckoned the maize of the country, which only grows in moderate quantity, and is here generally cultivated as a garden vegetable in the immediate proximity of the huts. The Madi tribe of the Mittoo are the only people who seem to cultivate it to any great extent.

There is one quality which pertains equally to all these varieties of grain which are grown in these torrid regions; it

is not possible from the flour which they provide to make bread in the way to which we are accustomed. All that can be made from the fermented dough is the Arabian bread, "kissere," as it is called—tough, leathery slices, cooked like pancakes on a frying-pan. If the fermentation has gone on far enough to make the dough rise for a good spongy loaf, when it is put into the oven it all crumples up, and its particles will not hold together; if, on the other hand, the fermentation has not proceeded sufficiently, the result is a heavy lump, and this is the ordinary daily achievement of the natives, who pack up their dough in leaves and bake it in the ashes. The wheats of the Upper Nile Valley, and even large Abyssinian kinds, have the same property, which may arise from the small proportion of *soluble* starch which exists in all corn of the tropics, however large the entire quantity of the starch may be. The presence or absence of gluten in the grain is irrelevant, and cannot be an adequate explanation with regard to sorghum, of which the better kinds are richer in gluten than our wheat.

Next, after the various sorts of corn, the leguminous plants play an important part amongst this agricultural population. Cultivated frequently alike by the Dinka and Dyoor is the catyang (*Vigna sinensis*), which is grown by the Shillooks more plentifully than by either; but the Bongo have a great preference for the mungo-bean (*Phaseolus mungo*), which they call "bokwa." The pods of these contain a little hard kernel, not unlike black pepper; in comparison with the catyang they are very poor eating. Wild representatives of both these classes of beans are almost universal throughout Africa, and demonstrate that they are indigenous to the soil. The best of all the beans is the *Phaseolus lunatus*, which is found of various colours, white, or brown, or yellow, and which in shape is like our own, although the legume is very short, and rarely contains more than two seeds. This is grown very freely by the Mittoo and the Madi, but the Bongo and the Dinka also give it their attention.

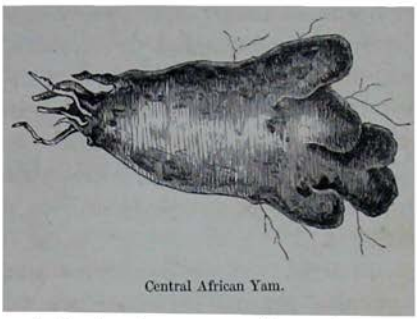
There are two kinds of these leguminous plants which are cultivated very extensively, and which fructify below the soil, that is, as the pods ripen the peduncles bend down and sink beneath the ground. These are the speckled pea-shaped voandzeia and the arachis, or earth-nut. Dispersed now everywhere over the tropics, the proper home of these is in Africa. The first is cultivated most of all by the Bongo; the single seed which its pod contains is mealy, but cooking does not soften it, and it is consequently very indigestible.

The earth-nut, on the contrary, is of an oily nature. It is seldom wanting amongst any of the tribes; in value it is almost a rival of the sesame, to the culture of which the Bongo give their care next to their sorghum.

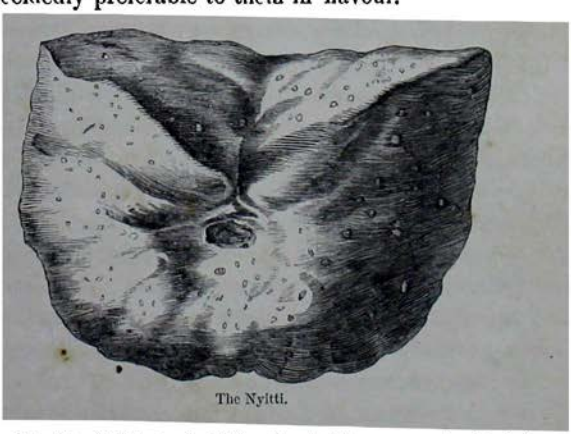
Another oily vegetable product of the country is the *Hyptis spicigera*, which the Bongo named "kendee." Once sown among cultivated plants it becomes a sort of half-wild growth, and establishes itself as an important shrub between the stubble. The Bongo and Niam-niam especially store large quantities of it. The tiny seeds, like those of a poppy-head, are brayed to a jelly, and are used by the natives as an adjunct to their stews and gravies, the taste and appearance being very similar to the hemp-pap of the Lithuanians. Just as poppy and hemp to the people of the North, so here to the natives the sesame and the hyptis appear a natural product so enjoyable that, without any preparation whatever, it can be eaten from the hollow of the hand, according to Boccaccio's expression, "more avium."

A very subordinate place is occupied in the cultural pursuits of these people by any of the tuberous vegetables. Various kinds of yams (*Dioscorea alata*, and *D.* or *Helmia bulbifera*) are found in the enclosures of the Bongo and of the Dinka, and are here and there cultivated in some measure like the maize, under the eye of the proprietor. The Niam-niam and the Monbutto, who devote more attention to the growth of tubers than of cereals, have a greater preference for the sweet potato (*Batatas*), the manioc, and the colocasia,

and other bulbs, which to the northern people are quite unknown. All the yams in these parts seem to exhibit the same form, which is reckoned the most perfect in this production, lavished by bountiful Nature on man with so little labour on his part. The tubers of the Central African species are very long; at their lower extremity they have a number of thick protuberances; they are similar to a human foot, or rather (taking their size into account) to the great foot of an elephant. Some were brought to me which varied in weight from 50 to 80 lbs. The substance of the tuber, which is easily cooked, is light, mealy, and somewhat granulated; it is more loose in texture than our tenderest potatoes, and decidedly preferable to them in flavour.



Central African Yam.



The Nyitti.

The Nyitti (*Helmia bulbifera*), which are protruded from the axils of every leaf on the climbing sprouts, are in shape like a great Brazil-nut—a section of a sphere with a sharp

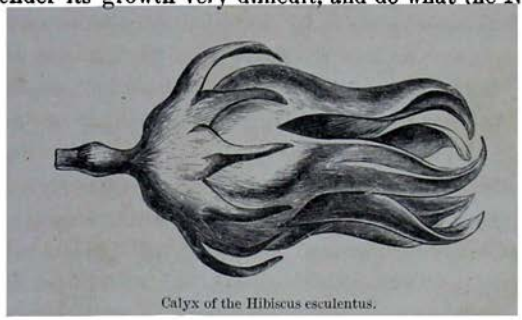
edge. In their properties they correspond much with our potato, particularly as regards their taste and their bulk; but they never develop themselves into such mealy masses as the ordinary yams. Their skin is remarkably like potato-peel, and altogether their colour, sometimes yellow, sometimes a thoroughly purple-brown, adds to the resemblance. Very frequently these plants grow wild, but in that condition the tubers are quite small, and have a taste so pungent that they are said by the natives to be full of a dangerous poison. To a kindred species which is found wild, and which produces a horn-shaped tuber, we shall have to allude hereafter.

Just before the sorghum-harvest commenced the gourds were ripening, and came on as a welcome boon to the natives, who at this season were suffering from the usual scarcity. They devoured incredible quantities of them, and I saw whole caravans of bearers literally fed upon them. Of the ordinary gourds (*Cucurbita maxima*) there are two kinds, the yellow and white, which succeed excellently and attain a prodigious size. There is a kind of melon with a hard woody rind, which the Dyoor and the Dinka cultivate: when half-ripe, they cook and enjoy it as a palatable vegetable; it is generally of a cylindrical form, and about a foot in length. As it grows it assumes the diverse shape of the *Cucumis chate*, the cooking-cucumber of the Egyptians, which they call "adyoor" and "abdalowy;" by its wild shapes it seems to reveal an African origin. The leaves of the gourds are boiled just like cabbages, and are used for a vegetable. The bottle-gourds do not grow anywhere here actually without cultivation, but in a sort of semi-cultivation they are found close to all the huts. From the edible kinds are made vessels, which are quite secure.

As actual vegetables the Bongo cultivate only the bamia or waka of the Arabians (*Hibiscus esculentus*) and the sabdariffa. The calyx of the latter is very large, varying in colour from a pale flesh to a dark purple, and is used as

a substitute for vinegar at meals. The bamia here is a larger variety of the Oriental vegetable; its seed-vessels before they are ripe are gathered and boiled.

Altogether unknown throughout the population of pagan negroes is the onion, which appears to have its southern limit in Kordofan and Darfoor. The equatorial climate seems to render its growth very difficult, and do what the Nubians



Calyx of the Hibiscus esculentus.

will, they are unable successfully to introduce this serviceable vegetable into the districts of their Seribas. The tomato may well be considered as a cosmopolite, making itself at home in all warmer latitudes, but previously to my arrival it had not found its way into this region.

For the sake of its fibres the *Hibiscus cannabinus* is very generally cultivated here, as it is in the Nile Valley; but I observed that the Bongo have another plant, the crotalaria, an improvement upon the wild sort (*C. intermedia*), from which they make excellent string.

Compared with Africa in general, this district seemed very deficient in the growth of those spices which serve as stimulants to give a relish and variety to dishes at meals. Red cayenne pepper, for instance, is swallowed by Abyssinians and Nubians in incredible quantities in their soups, but the Bongo regard it as little better than absolute poison. Although the first-comers found the indigenous pimento growing in all the enclosures, yet the Bongo reckoned it as so dangerous that they carefully kept it in guarded spots,

so that their children might not be victims to the deleterious effects of its bright red berries. The natives had been accustomed to poison their arrows with pimento, and I may mention this as one of the numerous proofs which might be alleged that much of the arrow-poisoning of Africa is quite a matter of imagination. When the natives witnessed the Nubians come and gather up the suspected berries and throw them into their food, their astonishment was unbounded; they came at once to the conclusion that it was utterly useless to contend with a people that could gulp down poison by the spoonful, and accordingly they submitted unconditionally to the intruders.

Of all the plants which are cultivated by these wild people, none raises a greater interest than tobacco, none exhibits a more curious conformity of habit amongst peoples far remote. The same two kinds which are cultivated amongst ourselves have become most generally recognised. These kinds are the Virginian tobacco (*Nicotiana tabacum*) and the common tobacco (*N. rustica*). It is little short of a certainty that the Virginian tobacco has only made its way into the Old World within the few centuries since the discovery of America. No production more than this has trampled over every obstacle to its propagation, so that it has been kept to no limits; and it must be matter of surprise that even Africa (notorious as it has ever been for excluding every sort of novelty in the way of cultivation) should have allowed the Virginian tobacco to penetrate to its very centre.

It is a great indication of the foreign origin of this plant that there is not a tribe from the Niger to the Nile which has a native word of their own to denote it. Throughout all the districts over which I travelled, the Niam-niam formed the solitary exception to this by naming the Virginian tobacco "gundeh;" but the Monbuttoo, who grow only this one kind and are as little familiar with *N. rustica* as the Niam-niam, call it "Eh-tobboo." The rest of the

people ring every kind of change upon the root word, and call it "tab, tabba, tabdeet," or "tom." The plant is remarkable here for only attaining a height of about eighteen inches, for its leaves being nearly as long as one could span, and for its blossoms being invariably white.

Quite an open question I think it is, whether the *N. rustica* is of American origin. Several of the tribes had their own names for it. Here amongst the Bongo, in distinction from the "tabba," it was known as "masheer." The growth it makes is less than in Europe, but it is distinguished by the extreme strength and by the intense narcotic qualities which it possesses. It is different in this respect from what is grown in Persia, where it is used for the narghileh or water-pipes, and whence there is a large export of it, because of its mildness and aromatic qualities. Barth* has given his opinion that the tobacco is a native of Logane (Mosgoo). At all events, the people of Africa have far surpassed every other people in inventing various contrivances for smoking, rising from the very simplest apparatus to the most elaborate; and thus the conjecture is tenable, that they probably favoured the propagation of the foreign growth, because smoking, either of the common tobacco (*N. rustica*) or of some other aromatic weed, had in some way already been a practice amongst them. To such a hypothesis might be opposed the important fact that on all the monuments of the ancient Egyptians that afford us so clear an insight into the details of their domestic life, there has never been found a written inscription or pictorial representation that could possibly afford a proof that such a custom was known to exist. In conclusion, it deserves to be mentioned that the pagan negroes, as far as they have remained uninfluenced by Islamism, smoke the tobacco, whilst those who have embraced Mohammedanism prefer the chewing of the leaf to the enjoyment of a pipe.

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* Vol. iii., p. 215.

CHAPTER VII.

THE BONGO: Area, boundaries, and population of Bongoland. Subjection of the Bongo to the Khartoomers. Decrease of population by slave-trading. Red tinge of the skin. Width of the skull. Small growth of hair. No aridity in climate. Wild tubers as food. Races of goats and dogs. Hunting-weapons. Villages and huts. Smelting furnaces. Money of the Bongo. Weapons for display. Wood-carving. Penates of the Bongo. Musical instruments. Character of Bongo music. Corpulence of the women. Hottentot Venus. Mutilation of the teeth. Disfigurement of the lips. Arrow-poisoning. National games. Marriage premiums. Natural morality. Disposing of the dead. Memorial erections. Mistrust of spirits. Loma, good and ill-luck. Fear of ghosts. Belief in witches. Peculiarities of language. Unity of the people of Central Africa. Extermination of the race.

I PURPOSE in this chapter to describe a people which, though visibly on the decline, may still by its peculiarity and striking independence in nationality, language, and customs, be selected from amid the circle of its neighbours as a genuine type of African life. Belonging to the past as much as to the present, without constitution, history, or definite traditions, it is passing away, like deeds forgotten in the lapse of time, and is becoming as a drop in the vast sea of the Central African races. But just as a biographer, by depicting the passions, failings, and virtues of a few individuals, may exhibit a representation of an entire epoch in history, so we may turn with interest to scenes which have been enacted in this limited district of the great and mysterious continent, sure of finding much edifying matter in the course of our investigations. Like the rain-drop which feeds the flowing river and goes its way to replenish

the mighty ocean, every separate people, however small, has its share in the changes which supervene in the progress of nations; there is not one which is without an abstract bearing on the condition of primitive Africa, and which may not aid us in an intelligent survey of any perspective that may be opened into its still dark interior.

To the antiquary, within whose province the description may lie in a degree, the material that is offered must be in a measure attractive. A people, as long as they are on the lowest step of their development, are far better characterised by their industrial products than they are either by their habits, which may be purely local, or by their own representations, which (rendered in their rude and unformed language) are often incorrectly interpreted by ourselves. If we possessed more of these tokens, we should be in a position to comprehend better than we do the primitive condition of many a nation that has now reached a high degree of culture.

Of all the natives with whom I had intercourse in my wanderings, the majority of those who acted as my bearers, and amongst whom I most frequently sojourned, were the Bongo. It was in their territory that I spent the greater part of my time in the interior; and thus it happened that I became intimate with many particulars of their life, was initiated into all their habits, and even to a certain extent mastered their dialect.*

The present country of the Bongo lies between lat. 6° and 8° N. on the south-western boundary of the depression of the Bahr-el-Ghazal basin, and on the lowest of the terraces where the southern slopes appear to make a transition from the elevated ferruginous crust to the unfathomed alluvial flats which are traversed by all the affluents of

* Vide 'Linguistische Ergebnisse einer Reise nach Central Afrika,' by Dr. G. Schweinfurth. Berlin: Wiegandt and Hempsel, 1873.

the river. In the extent of its area the land covers about the same surface as Belgium, but with regard to population, it might be more aptly compared to the plains of Siberia or the northern parts of Norway and Sweden; it is a deserted wilderness, averaging only 11 or 12 people to the square mile. The country extends from the Roah to the Pango, and embraces the middle course of nearly all the affluents of the Gazelle; it is 175 miles long by 50 miles broad, but towards the north-west the breadth diminishes to about 40 miles. On the north it is only divided by the small Dyoor country from that of the Dinka, which, however, it directly joins upon the north-east. The south-east boundary is the Mittoo territory on the Roah; and that on the west is the country of the Golo and Sehre on the Pango. The eastern branch of the extensive Niam-niam lands joins the Bongo on the south; whilst, wedged between and straitly pressed, the Bellanda and the Babuckur have their settlements.

When, eighteen years ago, the Khartoomers first set foot in Bongoland, they found the entire country divided into a number of independent districts, all in the usual anarchy of petty African communities; there was nothing anywhere like an organised commonwealth such as may be found amongst the Dinka, where entire districts unite and form an imposing warlike tribe. Every village simply had its chief, who, in virtue of superior wealth, exercised a certain authority over the rest of the inhabitants, and who, in some cases, had an additional *prestige* from his skill in the art of magic. The Nubians, consequently, never had to contend against the unanimous hostility of a powerful or well-disciplined people, and only in a few isolated places had to encounter much resolute opposition. Their soldiers, not merely by the tenor of their religion, conceived themselves justified in perpetrating every sort of outrage upon heathen unbelievers, but they were taught to consider their acts

of violence as meritorious in the sight of God: it was, therefore, an easy matter for them to fall upon the weak authorities of the country, and in the space of a few years to apportion the entire territory amongst the few ivory merchants in Khartoom, whose spirit of enterprise, suddenly kindled by the exaggerated reports of the profits secured on the Upper Nile by Europeans, the first explorers, had developed itself into a remarkable activity.

The natives were without difficulty reduced to a condition of vassalage, and, in order that they might be under the close supervision and at the service of their oppressors, they were compelled to quit their homes, and to reside near the Seribas that were established in various parts of the land. By the application of this sort of feudal system, the trading companies brought about the realisation of their project for a permanent occupation of the country. Shut in by the Niam-niam on the south and by the Dinka on the north, Bongoland offered a twofold advantage for the establishment of headquarters for the expeditions: in the first place, it was in close proximity to the Mesheras, or landing-places; and, secondly, by its advanced position towards the interior, it afforded most ample opportunities for setting in operation the contemplated excursions to the prolific ivory districts of the south. The Dinka, hostile and intractable from the first, had never given the intruders the smallest chance of settling amongst them; while the Bongo, docile and yielding, and addicted almost exclusively to agriculture, had, on the other hand, contributed in no slight measure to maintain the Seribas. If ever, now and again, they had been roused to offer anything like a warlike opposition, they had only too soon succumbed to the motto of the conquerors, "Divide, et impera."

The Dyoor, the Golo, the Mittoo, and other smaller tribes, shared the fate of the Bongo, and in the short space of ten years a series of more than eighty Seribas had arisen between

the Rohl and the Beery. Scarcely half the population escaped slavery, and that only by emigrating; a portion took refuge amongst the Dinka on the north, and others withdrew southwards to the Niam-niam frontiers, where the isolated mountains enabled them to hold out for a while. The Khartoomers, however, were not long in pursuing them, and gradually displaced them even from this position.

During the early years of their occupation, the Nubians beyond a question treated the country most shamefully; there are traces still existing which demonstrate that large villages and extensive plots of cultivated land formerly occupied the scene where now all is desolation. Boys and girls were carried off by thousands as slaves to distant lands; and the Nubians, like the *parvenu* who looks upon his newly-acquired wealth as inexhaustible, regarded the territory as being permanently productive; they revelled like monkeys in the durra-fields of Taka and Gedaref. In course of time they came to know that the enduring value of the possessions which they had gained depended mainly on the physical force at their disposal; they began to understand how they must look to the hands of the natives for the cultivation of their corn, and to their legs for the transport of their merchandise. Meanwhile, altogether, the population must have diminished by at least two-thirds. According to a careful estimate that I made of the numbers of huts in the villages around the Seribas and the numbers of bearers levied in the several districts, I found that the population could not at most be reckoned at more than 100,000, scattered over an area of nearly 9000 square miles.

On first landing from the rivers, the Khartoomers opened up an intercourse with the Dinka, who did not refuse to furnish them with bearers and interpreters for their further progress into the interior, and it was from them that they

learnt the names of the different tribes. In Central Africa every nation has a different designation for its neighbours than that by which they are known among themselves; and it is the same with the rivers, which have as many names as the nations through whose territory they flow. In this way the Nubians have adopted the Dinka appellations of Dyoor for Lwoh, Niam-niam for Zandey, and Dohr for Bongo. This last people always style themselves Bongo, and the Khartoomers, since they have made their head-quarters in their territory, have discarded the Dinka name of Dohr, and now always use the native term Bongo. According to the Arabic form of expression, the plural of Dohr is Derahn, and of Niam-niam it is Niamahniam.

The complexion of the Bongo in colour is not dissimilar to the red-brown soil upon which they reside; the Dinka, on the other hand, are black as their own native alluvium. The circumstance is suggestive of Darwin's theory of "protective resemblance" among animals; and although in this instance it may be purely accidental, yet it appears to be worthy of notice. Any traveller who has followed the course of the main sources of the White Nile into the heathen negro countries, and who has hitherto made acquaintance only with Shillooks, Nueir, and Dinka, will, on coming amongst the Bongo, at once recognise the commencement of a new series of races extending far onwards to the south. As trees and plants are the children of the soil from which they spring, so here does the human species appear to adapt itself in external aspect to the red ferruginous rock which prevails around. The jet-black Shillooks, Nueir, and Dinka, natives of the dark alluvial flats, stand out in marked distinction to the dwellers upon the iron-red rocks, who (notwithstanding their diversity in dialect, in habit, or in mode of life) present the characteristics of a connected whole. Of this series the tribes which must be accounted the most important are the Bongo, the Mittoo, the Niam-niam, and

the Kredy, all of which are equally remarkable for their entire indifference to cattle-breeding. The whole of these, especially the women, are distinguished for the reddish hue of their skin, which in many cases is almost copper-coloured. It cannot be denied that this red-brown complexion is never entirely wanting, even amongst the darkest skins that are found in the lowlands; but the difference between their complexion and what is ordinarily observed among the Bongo is only to be illustrated by the contrast in colour between a camellia leaf in its natural condition and after its epidermis has been removed.

Although amongst every race the tint of the complexion is sure to deviate into considerable varieties of shade, yet, from a broad estimate, it may be asserted that the general tint remains unaltered, and that what may be denominated the "ground tint" constitutes a distinctive mark separating between race and race. Gustav Fritsch, in his work upon the people of Southern Africa, has bestowed great attention upon this subject, and by means of an ingenious table, arranged according to the intensity of various shades of colour, has very perspicuously explained the characteristics of the Kaffirs, Hottentots, and Bochjesmen. As matter of fact, among the Bongo may be seen individuals with their skin as black as ebony; but yet this does not prevent the true ground tint of their complexions being something essentially distinct from any example that could occur among the true Ethiopians, whether these might be light or dark. The evidence of the distinction of which I speak, I have no doubt is altogether very conclusive; and I have had many opportunities of testing its reality in my observations at the various Seribas, where half-castes are very numerous, being the offspring of Nubians (including Bedouins in that category) and Bongo.

In taking a coloured likeness of a Bongo it is necessary to use the deep red pigment known as Pompeian red very freely. I was once in the studio of an artist at Rome who

was painting in oil the likeness of a Bongo whom I had brought to Europe. I could not help observing that he made the ground-tint of the flesh quite of a liver colour (hepatic) hue, whilst when he was portraying natives, either of Dongola or of Berber, or even when he was depicting the true Arabs, although their skins were equally dark, he did not make use of red at all, but employed a kind of yellow for the basis of the shades to follow. His proceeding appeared to me an involuntary attestation to the distinction which really exists.

Like the Niam-niam, Mittoo, and Kredy, the Bongo rarely exceed a medium height. They differ, however, in several respects from the Dinka and other people of the lowland plains. Their prominent characteristics appeared to me to consist in a more compact form of limb, a sharper development of muscle, a wider formation of the skull, and generally a preponderating mass in the upper part of the body. Of 83 men that I measured I did not find one who had attained a height of 6 ft. 1 in., whilst the average height did not appear to me to be more than 5 ft. 7 in. Dinka and Bongo alike afforded very striking samples of the two great series of races which they severally represented, and each displayed the principal characteristics of their particular race in their stature, their complexion, and their form of skull. I cannot recall a single instance among the Bongo where the skull was of the long but narrow shape that is all but universal among the Dinka. Of many of these Bongo that I measured, I should pronounce that they would require to be classified as hardly removed from the lowest grade of the Brachycephaly. They appear themselves to be aware of this characteristic. I remember a discussion that once arose about a little boy, too young to speak, as to whether he was a Dinka or a Bongo. One of the interpreters, after minute examination of the proportions of the child's head, came to an immediate, but decided, opinion that the boy was a Bongo,

and in answer to my inquiry as to the grounds on which he so confidently based his decision, he explained that he judged from the fact that the head was broad; he went on, moreover, accompanying his words by corresponding gestures, to say that the Bongo women, as soon as an infant is born, press its head downwards, but the Dinka mothers, on the contrary, compress the heads of their babies from the sides. Now, although it is hardly credible that this manipulation on the part of the mothers would have any permanent influence on the conformation of the skulls of an entire nation, yet we may accept the statement as a significant proof of the high estimation in which the natives hold this attribute and token of their race. It has been proved by experience that in the most diverse nations of the earth, mothers will always be ready to use external means to promote as far as they can any signs of nationality in their offspring, ignorant of the certainty that these signs would of themselves, without assistance, be manifested eventually. In order to effect an actual alteration in the shape of the skull, such as may be observed amongst the Mongolian and American Indian tribes, it is necessary to employ continuous and forcible pressure, and to bind the head with straps and bandages from the earliest infancy.

The hair of the Bongo offers no peculiarity, either with regard to its culture or its growth, that can be deemed of any special interest; it is short and curly; moreover, it is of that woolly nature at which, in default of anything better, the theorist who propounds the doctrine of the independent and yet of the mutual connection of the heathen races eagerly clutches. Corresponding to the numerous gradations in complexion and formation of the skull are the varieties in growth of the hair which are exhibited. Hair which is thick and frizzly is common amongst every race that has hitherto been discovered on African soil, and although there are a few unimportant exceptions among the Arab tribes

(the Sheigieh) who have settled in Nubia, and notwithstanding that the hair of the Ethiopians, as well as that of the North African people may be termed curly more appropriately than woolly, yet straight hair is nowhere to be found. The real distinctions, therefore, in the growth of the hair in the nations of Central Africa consist in the colour and length, which vary considerably in the different races; beards predominate with some, whilst with others they fail entirely. In common with most other people of the red soil, the Bongo have hair which is perfectly black, but in its length it is very different from that of the Niam-niam. On the Niam-niam frontiers the Bongo have often tried to imitate their neighbours by twisting and plaiting their hair, but their attempts have been always a failure. Whiskers, beards, and moustaches are cultivated in very rare cases, but the hair never grows to a length much exceeding half-an-inch.

Bongoland is traversed from south to north by five important tributaries of the Gazelle. With these are associated a number of smaller rivulets which are not permanent streams; nevertheless, from the pools which remain in their beds throughout the dry season, they furnish a sufficient supply of moisture to maintain the vegetation of the country. Water for drinking never fails, although from November to the end of March a fall of rain is quite exceptional. In cases of necessity water can always be procured without much time or trouble from those pools which survive the periodical water-courses in the marshes. Dearth as a consequence of prolonged drought appears to be a condition quite unknown; certainly it has not occurred for the last ten years. The crops are far more frequently injured by superabundant moisture than by drought, and the continuance of wide inundations has been followed by famine. Everything seems to suggest the thought how easily rice might be cultivated in the country.

The Bongo are essentially an agricultural people. With

the exception of some occasional hunting and some intermittent periods devoted to fishing, they depend entirely upon the produce of the soil for their subsistence. Their cultivated plants have already been noticed in a previous chapter. To agriculture men and women alike apply themselves, devoting their greatest attention to the culture of their sorghum. The amount of labour they bestow upon this cereal is very large. The seed is lavishly broadcast into trenches which have been carefully prepared for its reception, and when it has germinated and made its appearance above the ground, two or three weeks are spent in thinning the shoots and in transplanting them away from the spots where they are too thick; a system which experience has shown can very advantageously be applied to maize. Very few vegetables are cultivated, but for these the people find a variety of substitutes in the wild plants and tubers which abound. Everywhere throughout the tropics the Gynandropsis, the Corchorus, and the Gieseckia grow close upon the confines of the abodes of men, and the leaves of these, like the leaves of the gourd, are frequently used as an ingredient in soup. The fleshy leaves of the *Talinum roseum* are served up in the same way as our spinach; and the tough foliage of the Tirna-tree (*Pterocarpus*), as it becomes soft in the process of boiling, is employed as a vegetable, and is really sweet and tender. The fruit of the Hymenocardia, not unlike that of the maple, has an acid flavour far from unpleasant, and serves a similar purpose.

During the rainy season the country is very prolific in many varieties of funguses. The Bongo have a great fancy for them; they keep them till they are on the verge of decay, and then dry and pound them. They use them for the purpose of flavouring their sauces, which in consequence are enriched by a *haut goût*, which without depreciation may perhaps be compared to rotten fish. Throughout the country I never saw any funguses but what were perfectly edible,

and some of them I must confess were very palatable. The natives call them all "Kahoo," while to the larger species they give the special name of "hegba-mboddoh," which is synonymous with the Low German "poggen staul," or with the English "toad-stool." "Hegba" is the name which the Bongo give to their little carved stools, and "mboddoh" is the generic term for all frogs and toads, and the proper designation for the *Bufo pandarinus* in particular. This "hegba-mboddoh," which has thus suggested the same idea in very remote parts of the world, is here a gigantic Polyporus; not unfrequently specimens may be found of it which grow to a height of nine inches, are a foot in diameter and weigh nearly fifty pounds. In form, size, and colour they are not unlike the grey clay edifices of the *Termes mordax*, of which I shall have occasion to speak hereafter. The funguses which are most common, and which moreover are the most preferred, are the different species of Coprinus, Marasmius, Rhodosporus, and the tough but aromatic Lentinus.

I have already mentioned the great abundance of edible, if not always palatable, fruit which is produced by the common trees of the country. In clearing the woods for their tillage the Bongo are always careful to leave as many of these trees as they can, and by thus sparing them they preserve many a noble ornament to their fields, which would otherwise be as monotonous as they are flat. The Butter-tree and the Parkia are very carefully in this way saved from destruction, and form a striking feature in many of their landscapes. It is a remarkable peculiarity of the flora of this region that all the species which are not essentially shrubby or arborescent strive for a perennial existence; and, as evidence of this, it may be observed that the roots and portions of the stem beneath the soil either develop into bulbs and tubers, or exhibit a determination to become woody. Annuals occupy a very insignificant place, and all vegetation seems to be provided with a means of withstand-

ing the annual steppe-burning, and of preserving the germs of life until the next period of vitality recurs. When their corn provision is exhausted, or when there is a failure in the harvest, then do the Bongo find a welcome resource in these tubers; they subsist upon them for days in succession, and find in them the staple of their nourishment whenever they go upon their marches in the wilderness.

Quite incredible is it what the Bongo are able to digest. Most of the bulbs and tubers are so extremely bitter that it is not until they have been thoroughly steeped in boiling water or have had their pungent matter mollified by being roasted at a fire, that they can be eaten at all; they are gall to the taste. Amongst these bitter bulbs there are two which may claim a special notice; these are the Mandibo and the Moddobehee. The Mandibo is a species of Coccinea, which is nearly everywhere very abundant; the Moddobehee (dog's gum) is one of the Eureiandræ; they are both Cucurbitaceæ, and both contain poisonous matter. Impregnated with the like bitterness are the rape-like roots of the Asclepiadeæ, the huge tubers of the *Entada Wahlbergii*, and of the Pachyrrhizus; so also are the various kinds of Vernoniæ and Flemingiæ, which are dug up from a foot below the surface of the soil.

The natives can make but little use of the plants which grow from any of these numerous tubers. The diminutive Drimia lifts its pretty red blossoms about a couple of inches above the rocky ground, and is a bulbous plant which becomes edible after a prolonged boiling.

Whenever a halt is made upon the marches across the wilderness, the bearers, as soon as they are liberated from their burdens, set very vigorously to work and grub up all sorts of roots from the nearest thickets. I can myself vouch for a fact, which might fairly be deemed incredible, that thirty Bongo who accompanied me on my return to Sabby, at a time when I had scarcely enough to keep me from

starvation, subsisted for six consecutive days entirely on these roots, and although we were hurrying on by forced marches, they lost neither their strength nor their spirits. Their constitution was radically sound, and they seemed formed to defy the treatment of their inhospitable home.

Already it has been mentioned that there is an entire deficiency of common salt throughout the district of the Gazelle. The alkali that is everywhere its substitute is obtained by soaking the ashes of the burnt wood of the *Grewia mollis*, a shrub common throughout Bongoland, and which is notoriously useful in another way by the quantity of bast which it produces.

Tobacco is indispensable to the Bongo, and is universally cultivated. The species known as Mashirr (*Nicotiana rustica*) is very pungent; its small thick leaves are pounded in a mortar, and are subsequently pressed and dried in moulds. From the cakes thus formed, the natives break off fragments as they require them, grind them into powder by means of stones, and smoke the preparation in long pipes that have very pretty clay bowls. They are addicted to smoking quite as inveterately as many of the nations that live in the polar regions, and are not content until they are utterly stupefied by its effects. I had a circumstance brought under my notice which exhibited to me the extreme to which they can carry their abuse of the narcotic: upon one of our marches a Bongo man had indulged to such excess, and had inhaled the pungent fume so long, that he fell senseless into a camp-fire, and was taken up so severely burnt that he had to be carried by his comrades on a litter for the remainder of the journey.

The Bongo fashion of smoking is even more disgusting than that which has been already described as prevalent amongst the Dinka. In the same manner as with them, the pipe is passed from hand to hand, but the lump of bast that intercepts the pungent oil is not placed in the receptacle of

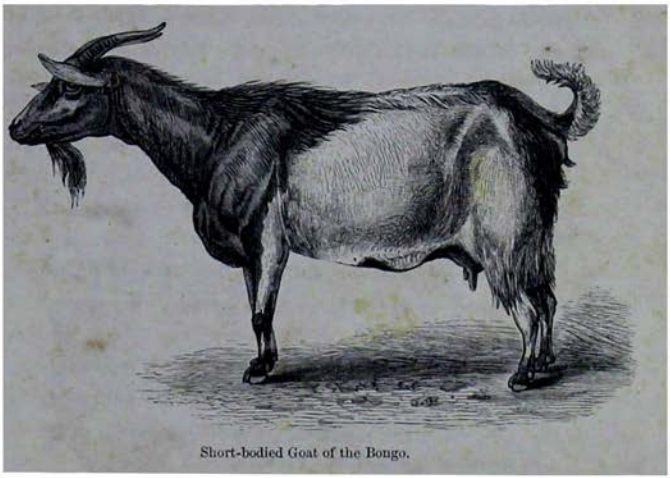
the stem, but is pùt in the mouth of the smoker, and together with the pipe is passed from one person to another. The habit of chewing tobacco is adopted as much by the Bongo as by the Mohammedan inhabitants of Nubia; but the custom is so universal that there would seem to be ample justification for the belief that it is indigenous rather than what has been acquired from foreigners. The practice in which the Bongo indulges of placing his tobacco quid behind his ear is very repulsive.

It is to their indifference to cattle-breeding, like what is practised so extensively by the Dinka, that the Bongo owe their comparatively peaceful relations with the so-called "Turks." It is to the same cause that the latter are indebted for the sluggish measure of opposition shown them by their vassals. The domestic animals of the Bongo are poultry, dogs, and goats; sheep being almost as rare as cattle. The

Bongo Goat.

goats are unlike those of the Dinka, but are of a breed quite common throughout these regions of Central Africa. Not only did I see them amongst the Mittoo and Madi, but like-

wise among the Babuckur, and even in the country of the Monbuttoo, whither they had been brought by the equatorial nations whom the Monbuttoo simply style the "Momvoo." These goats, like the Dinka sheep, are distinguished by a hairy appendage from the breast and shoulders, and by a short stiff mane, which runs right along the ridge of the back to the small erect tail. The frontal is round, and projects considerably beyond the base of the nasal bone, and the horns are very strong and but slightly curved. The ordinary colour of these pretty animals is a light fawn or chamois-brown, the mane being very dark. I occasionally



Short-bodied Goat of the Bongo.

found the Bongo in possession of another breed which I met with nowhere else, and which is probably merely a cross with the Dinka goat. It has a remarkably short and plump body, and is generally of a pepper-and-salt colour. The coat is somewhat longer and more shaggy than that of the other breed, and besides the mane-like appendage in front the hind quarters are also covered with long rough hair.

The Bongo dogs, with regard to size, are between the small Niam-niam race and the Dinka breed, which corresponds

more nearly to the common pariah of Egypt. On account of the indiscriminate crossing of the races, a dog of pure Bongo breed is somewhat rare; its chief characteristics are a reddish tan colour, short erect ears, and a bushy tail like a fox's brush. Their greatest peculiarity appeared to me to be the bristling of their hair, which at every provocation stands up along the back and neck like that of an angry cat. The bushiness of the tail distinguishes the breed from the smooth-tailed Dinka dog, and from that of the Niam-niam, of which the tails are as curly as pigtails.

Although the Bongo are not over choice in their food, they persistently abstain from eating dog's flesh, a practice to which their southern and south-eastern neighbours are notoriously addicted; in fact, they show as much abhorrence at the idea as they would at devouring human flesh itself. They have a curious superstition about dead dogs. I was about to bury one of my dogs that had recently died, and some of the men came and implored me to desist from my intention, since the result would assuredly be that no rain would fall upon their seeds. For this reason all the Bongo simply throw their dead dogs out into the open fields.

At some seasons, especially at the end of the rainy months, fishing and hunting offer productive sources for obtaining the means of subsistence. Hunting is sometimes practised by independent individuals going out separately; but at other times it takes the form of an extensive *battue*, in which the men belonging to a whole district will combine to take a share. Occasionally, too, a rich booty is obtained from the trenches and snares. Nets are used in all the *battues* for game, and the Bongo devote as much attention to the construction of these nets as they do to the weaving of their fish-snares and basket-pots. Their fishery is principally limited to the winter months.

Elephant-hunting has for the last twelve years been among the things of the past. It is only the oldest of the

men—and here the number of the men that are really old is very small—who appear to have any distinct recollection of it at all. The huge lance-heads, which are now only weapons of luxury in the possession of the wealthy, or upon some rare occasions used for buffalo-hunting, are the sole memorials of the abundance of ivory of which Petherick, as an eye-witness, has given so striking a description. The snares by which the Bongo succeed in catching the smaller kinds of game generally consist of the stem of a tree balanced horizontally by means of ropes.* A spot which the game is known to haunt is selected for the erection of these snares; a hedge, or some sort of enclosure, is set up on each side of the tree so that the game may be obliged to run underneath; it is arranged so that the animals as they pass tread upon a kind of noose or slip-knot which slackens the ropes by which the tree is suspended, and the falling weight crushes and kills the game below. The numbers of snares of this description which are found in the bush-thickets is a sufficient proof of their efficacy. The smaller species of antelopes, ichneumons, civets, genets, wild cats, servals, and caracals, are all in turn caught by this stratagem.

Hunting on a minor scale is a very favourite recreation, and the children find a daily amusement in catching rats and field-mice. They weave baskets in the form of long tubes, which they lay flat upon the ground in the immediate neighbourhood of the mouse-holes; they then commence a regular *battue*, when the scared mice, scampering back to regain their homes, run through the stubble, and often rush into the open traps, where, like fish in a weir-basket, they are easily secured. In this way the Bongo boys catch considerable quantities of meriones, *Mus gentilis*, and *M. barbarus*, which they tie together by their tails in clusters of

* An illustration of this contrivance appears in Petherick's 'Travels in Central Africa,' vol. i. p. 255.

about a dozen, and barter them to each other as dainty morsels. "These are our cows," they would shout to me with great glee whenever I met them returning after their sport had been successful. Another use which is made of the mice which are captured by this simple artifice is to employ them for a bait for securing what they esteem the especial delicacy of roast cat. On the narrow paths which traverse the steppes like rifts in the long grass, they construct diminutive huts out of some twisted reeds; by placing the mice inside these they are very often able to entice the cats into a snare.

With the exception of human flesh and the flesh of dogs, the Bongo seem to consider all animal substance fit for eating, in whatever condition it may be found. The putrefying remnant of a lion's feast, which lies in the obscurity of a forest and is only revealed by the kites and vultures circling in the air above, is to them a welcome discovery. That meat is "high" is a guarantee for its being tender, and they deem it in that condition not only more strengthening than when it is fresh, but likewise more easy of digestion. There is, however, no accounting for taste, certainly not with the Bongo, who do not recoil from the most revolting of food. Whenever my cattle were slaughtered, I always saw my bearers eagerly contending for the half-digested contents of the stomach, like the Esquimaux, whose only ideas of vegetables appears to be what they obtain from the contents of the paunches of their reindeers; and I have seen the Bongo calmly strip off the disgusting amphistoma-worms which literally line the stomachs of all the cattle of this region, and put them into their mouths by handfuls. After that, it was not a matter of surprise to me to find that the Bongo reckons as game everything that creeps or crawls, from rats and mice to snakes, and that he is not particular what he eats, from the carrion vulture to the mangy hyæna, or from the fat earth-scorpions (*Heterometrus palmatus*) to the

caterpillars of the winged termites with their oily beetle-bodies.

Having thus dilated with more minuteness than elsewhere upon the external features of Bongo life, such as their agriculture, hunting, and fishing, I may proceed to call attention to those arts by which, even in this low grade of development, man seeks to ameliorate and embellish his existence.

First of all, the dwelling-place may demand our notice, that which binds every man more or less to the soil which affords him his subsistence—that family nucleus, from which the wide-branching tree of human society has derived its origin.

In the period when the Khartoomers first made their way into the country, the Bongo, quite unlike the other tribes, inhabited extensive villages, which, similar to the present Seribas, were encompassed by a palisade. Neither towns nor villages are now to be seen, and the districts which are occupied at all are only marked by scattered enclosures and little gatherings of huts, as in the country of the Dinka and the Niam-niam. Very rarely are more than five or six families resident in the same locality, so that it is almost an exaggeration to speak of their being villages in any sense. The communities in past times seem to have had a preference for gathering round some great tamarind, ficus, or butter-tree, which often still survives and constitutes the only relic of habitations which have long fallen to decay; and even to the present time the Bongo appear to retain this partiality, and more often than not they may be found beneath the natural shade of a spreading roof of foliage, enjoying the light and space which are prohibited to their cramped and narrow dwellings. The ground for a considerable circuit about the huts is all well cleared and levelled, its surface being the general scene of labour on which all the women perform their ordinary domestic duties. The corn is there thrashed and winnowed; there it is brayed in the wooden mortars

or pounded by the mill; there are the leaves of the tobacco plant laid out to dry; there stand the baskets with the loads of mushrooms or supply of fruit; and there may be seen the accumulated store of nutritious roots. Dogs and poultry alike seem to revel in security under the majestic covering, while the little children at their play complete the idyllic picture of life in Central Africa.*

Upon the erection of their dwellings there is no people in the Gazelle district who bestow so much pains as the Bongo. Although they invariably adopt the conical shape, they allow themselves considerable diversity in the forms they use. The general plan of their architecture has already been sketched. The materials they employ are upright tree-stems, plaited faggots, canes of the bamboo, clay from the mushroom-shaped white-ant hills, and tough grass and the bast of the Grewia.

The diameter of the dwellings rarely exceeds twenty-feet, the height generally being about the same. The entrance consists of a hole so small that it is necessary to creep through in order to get inside; and the door consists of a hurdle swung upon two posts so as to be pushed backwards and forwards at pleasure. The clay floor in the interior is always perfectly level; it is made secure against damp as well as against the entrance of white ants by having been flattened down by the women trampling upon broad strips of bark laid upon it. The common sleeping-place of the parents and smaller children is on the floor. The bedding generally consists only of skins, the Bongo having little care for mats. For the pillow of the family they ordinarily use a branch of a tree smoothed by being stripped of its bark.

In every dwelling-place is found a conical receptacle for corn, named the "gallotoh," which is elevated on piles, varying in height, so as to protect the provision from the damp of

* For a pictorial representation of this scene, vide vol. ii.

the soil or from the ravages of rats or white ants. Magazines of this kind for the reserve of corn are in general use throughout Africa, from the Rumboo of Damerghoo in the Central Soudan, right into the country of the Kaffirs and Bechuanas.

All the dwellings of the Bongo, whether large or small, are marked by one characteristic, which might almost be represented as a national feature. The peak of their huts is always furnished with a circular pad of straw, very carefully made, which serves as a seat, and from which it is possible to take a survey of the country, covered with its tall growth of corn. The name of "gony" is given to this elevation, which is surrounded by six or eight curved bits of wood projecting as though the roof were furnished with horns. It is peculiar to the huts of the Bongo.

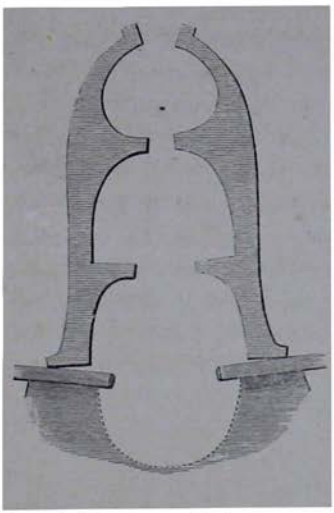
Iron is found in such quantities throughout the region that naturally the inhabitants devote much of their attention to its manipulation; its very abundance apparently secures them an advantage over the Dinka. Although, according to our conceptions they would be described as utterly deficient in tools and apparatus, still they produce some very wonderful results, even surpassing the Dyoor in skill. With their rude bellows and a hammer which, more commonly than not, is merely a round ball of pebble-stone (though occasionally it may be a little pyramid of iron without a handle) upon an anvil of gneiss or granite, with an ordinary little chisel and a pair of tongs consisting of a mere split piece of green wood, they contrive to fabricate articles which would bear comparison with the productions of an English smith.*

The season when opportunity is found for putting the iron-works in motion is after the harvest has been housed and the rains are over. Already, in a previous chapter,† iron-work,

* Vide Petherick, 'Egypt, the Soudan,' &c., p. 395.

† Vide Chap. V. p. 206, *seq.*

as produced by the Dyoor, has been noticed, but the Bongo have a system considerably more advanced, which appears worthy of a brief description. Their smelting apparatus is an erection of clay, generally about five feet in height,



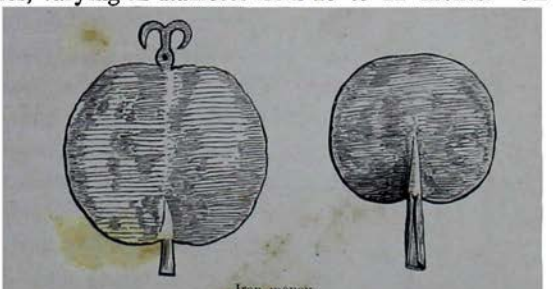
containing in its interior three distinct compartments.* These are all of the same size, that in the middle being filled with alternate layers of fuel and ore. This centre chamber is separated from the lower by means of a kind of frame resting on a circular projection; and it is divided from the chamber above by a narrow neck of communication. The highest and lowest of the divisions are used for fuel only. Round the base of the inferior chamber there are four holes, into which the "tewels" or pokers are introduced, and to which bellows are applied to increase the intensity of the combustion; there is a fifth hole, which can be stopped with clay as often as may be desired, and which serves to allow the metal to be raked out after it has trickled down into the cavity below the frame.

The most important of the iron productions are designed for the trade that the Bongo carry on with the tribes that dwell in the north, and which some time since was very active. The raw iron is exhibited in three separate shapes: one is named "mahee," being spear-heads of one or two feet long, corresponding exactly with what has been mentioned as common with the Dyoor; the second is known as

* The woodcut represents a vertical section of one of these smelting-ovens.

'loggoh kullutty," and is simply a lot of black, ill-formed spades; the third is called distinctively "loggoh," consisting of regular spades, which, under the market appellation of "melot," have a wide sale everywhere along the course of the Upper Nile.

The "loggoh kullutty" is the circulating medium of the Bongo, the only equivalent which Central Africa possesses for money of any description; but, rough-shaped as it is, it seems really to answer in its way the purpose of regular coin. According to Major Denham, who visited the Central Soudan in 1824, there were at that time some iron pieces which were circulated as currency in Loggon on the Lower Shary, answering to what is now in use among the Bongo; but at the period of Barth's visit all traces of their use had long disappeared. The "loggoh kullutty" is formed in flat circles, varying in diameter from 10 to 12 inches. On one



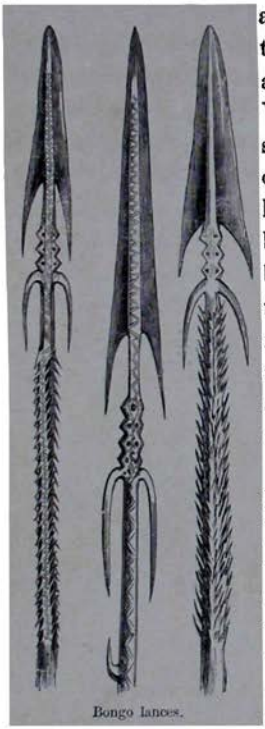
Iron money.

Loggoh Kulluty. Loggoh melot.

edge there is a short handle; on the opposite there is attached a projecting limb, something in the form of an anchor. In this shape the metal is stored up in the treasures of the rich, and up to the present time it serves as well as the lance-heads and spades for cash and for exchanges, being available not only for purchases, but for the marriage portions which every suitor is pledged to assign. The axe of the Bongo consists of a flat, cumbrous wedge of iron, into the thick end of which is inserted a knobbed handle; it is an instrument

differing in no particular from what may be seen throughout Central Africa.

Besides these rough exhibitions of their craft, the Bongo produce arms, tools, and ornaments of admirable quality, and, at the instance of the controllers of the Seribas, have manufactured chains and manacles for the slave-traffic. Very elegant, it might almost be said artistic, is the work displayed on the points of their arrows and lances. The keen and (to use a botanical expression) the "awny" barbs and edges of these instruments, to any one who is aware of the simple means of production in their reach, must be quite an enigma. The lances are readily recognised by their shapes, and may be classified in a threefold way. First, there is the common lancet-formed spear-head, which is known as "mahee;" then, secondly, there is the "golo," a hastate sort of spear, with long iron barbs below the point extending along the stem to which the wooden stock is attached; whilst the third description is called "makrigga," and consists of a spike, the stem of which is covered with a number of teeth symmetrically arranged along it, sometimes upwards and sometimes downwards. This makrigga is often merely an article of show, and the technical skill of the smith is concentrated upon its design. The name of makrigga is appropriated to it from the *Randia dumetorum*,* a prickly shrub,

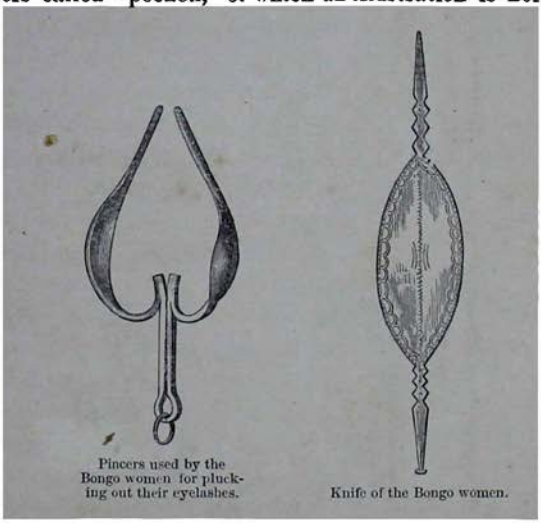


Bongo lances.

* Petherick in his 'Travels,' vol. i. p. 164, refers to this shrub, and designates one of its branches by the name of "ebony."

which is quite common in the district: seeming to indicate that the pattern is derived from an object in nature, it affords a fresh illustration of the view, that all human arts are only imitations of what may be observed in the free fields of a wide creation.

Equal care is bestowed upon the production of the iron and copper ornaments which are worn and the cutlery which is used by the women. For the purpose of plucking out their eyebrows and eyelashes, they employ a pair of little pincers called "peenoh," of which an illustration is here introduced. Quite peculiar to the Bongo women are their "tibbah," or elongated oval knives, with handles at either end, which are sharpened on both edges, and which are often very elaborate in their workmanship. These knives are in constant use for all domestic purposes, being of especial service in peeling their tubers and in slicing their gourds and cucumbers. The rings, the bells, the clasps, the buttons, whatever they affix to their projecting lips or attach to the rims of their ears, the lancet-shaped hair-pins, which

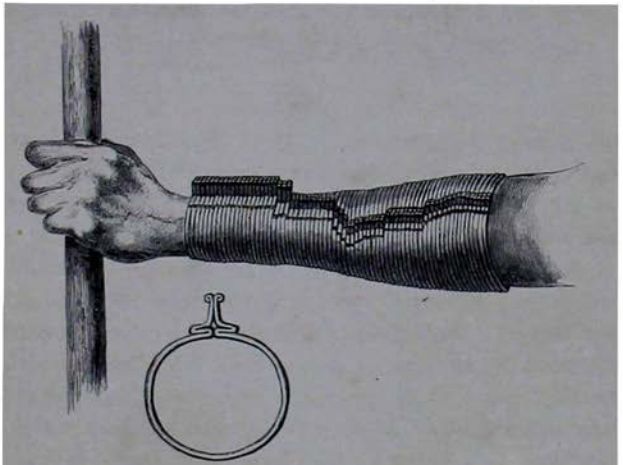


Pincers used by the Bongo women for plucking out their eyelashes.

Knife of the Bongo women.

appear indispensable to the decoration of the crown of their head and to the parting of their locks, all are fabricated to supply the demands of the Bongo women's toilet.

The decoration of which the mén are proudest is the "dangabor," which simply means "rings one above another." The Dinka and the Dyoor both have an ornament very similar to this, composed of accumulated rings, which cover the arm below the elbow; but the Bongo finish off their article with much more elaborate work. Each separate ring is fur-

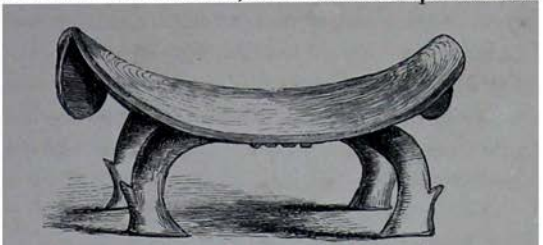


The Dangabor and a single ring.

nished with a boss of a height and strength to correspond with the ring next to it, the rings themselves being forged so as to become gradually larger in proportion as they are farther from the wrist. The arm is thus covered with what may be described as a sleeve of mail, each ring of which can be turned round or displaced at pleasure.

Hardly inferior to the skill of the Bongo in the working of iron is their dexterity in wood-carving. Perhaps the most striking specimens of their art in this way may be noticed in the little low four-legged seats or stools which are found in

every household, and are called "hegba." These are invariably made from a single block, the wood chosen for the purpose being that of the Göll-tree (*Prosopis lanceolata*, Benth.), which is of a chestnut brown, and after use acquires an excel-



Bongo stool.

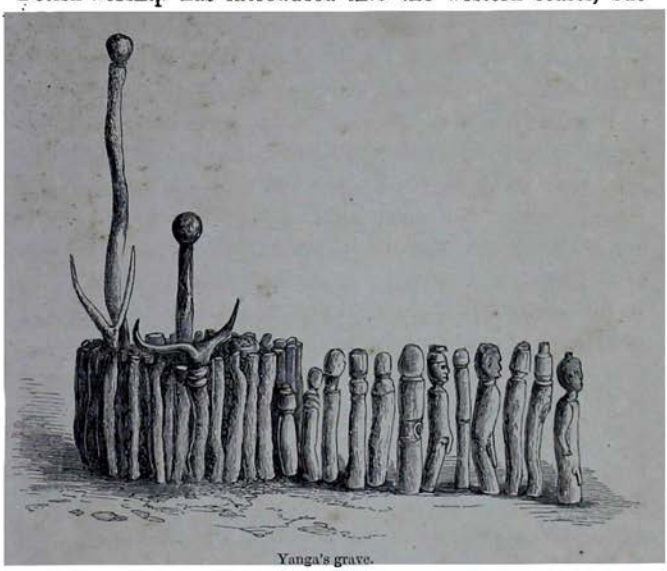
lent polish; they are used only by the women, who are continually to be seen sitting on them in front of their huts, but they are altogether avoided by the men, who regard every raised seat as an effeminate luxury.

Other articles of their fabric in wood are the pestles, the troughs for oil-pressing, the flails for threshing corn, and, most remarkable of all, the goblet-shaped mortars in which the corn is bruised before it is ground into flour upon the grinding-stones. Very graceful in shape are these mortars, not unlike a drinking-goblet with a cut stem; they are not sunk below the ground, as is ordinarily the case with those of the Dinka and Dyoor, but they can be removed whenever it is requisite from place to place. Their height is about thirty inches. Mortars of very similar design were noticed by Barth amongst the Musgoo, and they are also used by the Ovambo, the Makololo, and other negro nations. They are worked by two women at once, who alternately pound away with heavy pestles in a regular African fashion, which has been long immortalised by the pictorial representations of ancient Egypt. Very cleverly, too, do the Bongo cut spoons of very choice design out of horn, of the same shape as may be found in nearly every market in Europe.

Consequent upon the oppression to which the Bongo have now for years been subject, and the remorseless appropriation of all their energies by the intruders, very many of the primitive habits of the people were disappearing; and at the time of my visit my attention was rather arrested by what were memorials of a bygone and happier condition of things, than by anything that was really done under my eyes. Just as in the Central Soudan, in Bornoo, and in the Tsad countries, so here also the destructive power of Islamism has manifested itself by obliterating, in comparatively a brief space of time, all signs of activity and all traces of progress of any kind. Wherever it prevails, it annihilates the chief distinctions of race, it effaces the best vestiges of the past, and extends, as it were, a new desert upon the face of the land which it overruns. Those who have been eye-witnesses of the state of things when the intruders first broke in upon the country, gave me still further details of what had been the special industries of the people.

In the villages there are found very frequently whole rows of figures carved out of wood and arranged either at the entrances of the palisaded enclosures, forming, as it were, a decoration for the gateway, or set up besides the huts of the "Nyare" (chiefs), as memorials, to immortalise the renown of some departed character. In Moody, a district towards the west, I came across the remains (still in a perfect state of preservation) of an erection of this sort, which had been reared above the grave of the Bongo chieftain Yanga. Large as life, the rough-hewn figures represented the chief followed in procession by his wives and children, apparently issuing from the tomb. The curious conception of the separate individuals, and the singular mode in which they were rendered by the artist, awakened my keenest interest. The illustration which is subjoined may be accepted as a faithful representation of the first rude efforts of savages in the arts of sculpture.

Plastic representations of men are known generally by the name of "Moiogohgyee:" when I first saw them, I was under the impression that they must be idols, similar to what the Fetish-worship has introduced into the western coasts, but



Yanga's grave.

I soon satisfied myself of my misconception in this respect. The true design of these wooden figures is simply to be a memorial of some one who has departed this life: this is proved by the term "Moiagoh Komarah," *i. e.*, the figure of the wife, which is applied to an image raised by a surviving husband to the pious memory of his departed wife, and which is set up in the hut as a species of Penates. However rude these attempts must be pronounced, they nevertheless reveal a kind of artistic power certainly far from contemptible; at any rate, the very labour bestowed upon them indicates the appreciation which the artist entertained for his work. The Bongo, for their own part, regard their wooden images as incomparably superb, and persuade themselves that the

likenesses of those who are represented are perfect. To complete the illusion, they very often deck the figure with bead-necklaces and rings and affix some hair over the appropriate parts of the body. Travellers in Central Africa have narrated that they have seen figures of wood corresponding to what I have described, but although they have almost universally taken them for carved deities, I would venture to suggest that in all probability they are elsewhere monuments of the dead, in the same way as among the Bongo.

In addition it may be mentioned that a custom exists of raising a monument of this kind to preserve the memory of any *male* person who has been murdered. I was made acquainted with this circumstance by the mouth of one of the national authorities, who depicted to me the peculiar custom of his fathers in a narrative to the following effect. He said that murder and manslaughter used to be the order of the day at all their festivals and drinking-bouts; when the harvest had been abundant and the granaries were well-stored with corn, there used to be no bounds to their licentiousness; there was no respect for the Nyare, and his words were disregarded amidst the blows of the Nogarra. Now the "Turks" would punish a murderer by carrying off his wife and children, and compel him to pay a heavy fine in iron and make some compensation to the relatives: but formerly the friends would take the law into their own hands, and proceed to exact personal punishment, though they had to set to work very warily if they would keep themselves out of difficulty. When anyone discovered that either his friend, or it might be his brother, or perhaps his wife, had been killed, and the criminal could not be detected, it was no unknown device to prepare beforehand an image carefully representing the murdered person, and very often the likeness would be singularly perfect. He would then invite all the men to a feast, at which the spirituous "legyee" would be freely circulated; and then, when

the excitement was at its height, in the very midst of the singing and dancing, he would unexpectedly introduce the figure that had been prepared. The apparition would be sure to work its effect; the culprit would not fail to be betrayed, as he cowed and exhibited his wish to slink away. Having thus detected the offender, the injured party could deal with him as he pleased.

The Bongo, in their way, are enthusiastic lovers of music; and although their instruments are of a very primitive description, and they are unacquainted even with the pretty little guitar of the Niam-niam, which is constructed on perfectly correct acoustic principles, yet they may be seen at any hour of the day strumming away and chanting to their own performances. The youngsters, down to the small boys, are all musicians. Without much trouble, and with the most meagre materials, they contrive to make little flutes; they are accustomed also to construct a monochord, which in its design reminds one of the instrument which (known as the "gubo" of the Zulus) is common throughout the tribes of Southern Africa. This consists of a bow of bamboo, with the string tightly strained across it, and this is struck by a slender slip of split bamboo. The sounding board is not, however, made of a calabash attached to the ground, but the mouth of the player himself performs that office, one end of the instrument being held to the lips with one hand, while the string is managed with the other. Performers may often be seen sitting for an hour together with an instrument of this sort: they stick one end of the bow into the ground, and fasten the string over a cavity covered with bark, which opens into an aperture for the escape of the sound. They pass one hand from one part of the bow to the other, and with the other they play upon the string with the bamboo twig, and produce a considerable variety of buzzing and humming airs which are really rather pretty. This is quite a common pastime with the lads who are put in charge of

the goats. I have seen them apply themselves very earnestly and with obvious interest to their musical practice, and the ingenious use to which they apply the simplest means for obtaining harmonious tones testifies to their penetration into the secrets of the theory of sound.

As appeals, however, to the sense of sound, the great festivals of the Bongo abound with measures much more thrilling than any of these minor performances. On those occasions the orchestral results might perhaps be fairly characterised as cat's music run wild. Unwearied thumping of drums, the bellowings of gigantic trumpets, for the manufacture of which great stems of trees come into requisition, interchanged by fits and starts with the shriller blasts of some smaller horns, make up the burden of the unearthly hubbub which re-echoes miles away along the desert. Meanwhile, women and children by the hundred fill gourd-flasks with little stones, and rattle them as if they were churning butter: or again, at other times, they will get some sticks or dry faggots and strike them together with the greatest energy. The huge wooden tubes which may be styled the trumpets of the Bongo are by the natives themselves called "manyinyee;" they vary from four to five feet in length, being closed at the extremity, and ornamented with carved work representing a man's head, which not unfrequently is adorned with a couple of horns. The other end of the stem is open, and in an upper compartment towards the figure of the head is the orifice into which the performer blows with all his might. There is another form of manyinyee which is made like a huge wine-bottle; in order to play upon it, the musician takes it between his knees like a violoncello, and when the build of the instrument is too cumbrous, he has to bend over it as it lies upon the ground.

Little difference can be noticed between the kettle-drums of the Bongo and those of most other North African negroes. A section is cut from the thick stem of a tree, the preference

being given to a tamarind when it can be procured; this is hollowed out into a cylinder, one end being larger than the other. The ends are then covered with two pieces of goat-skin stripped of the hair, which are tightly strained and laced together with thongs. At the nightly orgies a fire is invariably kept burning to dry the skin and to tighten it when it has happened to become relaxed by the heavy dews.

A great number of signal-horns may be seen made from the horns of different antelopes; these are called "mangoal," and have three holes like small flutes, and in tone are not unlike fifes. There is one long and narrow pipe cut by the Bongo out of wood which they call a "mburrah," and which has a widened air-chamber close to the mouth-piece, very similar to the ivory signal-horns which are so frequently to be seen in all the negro countries.

Difficult were the task to give any adequate description of the singing of the Bongo. It must suffice to say that it consists of a babbling recitative, which at one time suggests the yelping of a dog and at another the lowing of a cow, whilst it is broken ever and again by the gabbling of a string of words which are huddled up one into another. The commencement of a measure will always be with a lively air, and every one, without distinction of age or sex, will begin yelling, screeching, and bellowing with all their strength; gradually the surging of the voices will tone down, the rapid time will moderate, and the song be hushed into a wailing, melancholy strain. Thus it sinks into a very dirge, such as might be chanted at the grave, and be interpreted as representative of a leaden and a frowning sky, when all at once, without note of warning, there bursts forth the whole fury of the negro throats; shrill and thrilling is the outcry, and the contrast is as vivid as sunshine in the midst of rain.

Often as I was present at these festivities I never could

prevent my ideas from associating Bongo music with the instinct of imitation which belongs to men universally. The orgies always gave me the impression of having no other object than to surpass in violence the fury of the elements. Adequately to represent the rage of a hurricane in the tropics any single instrument of course must be weak, poor, and powerless, consequently they hammer at numbers of their gigantic drums with powerful blows of their heavy clubs. If they would rival the bursting of a storm, the roaring of the wind, or the splashing of the rain, they summon a chorus of their stoutest lungs; whilst to depict the bellowings of terrified wild beasts, they resort to their longest horns: and to imitate the songs of birds, they bring

a kind of basket, equally strong and flexible, which answers its purpose admirably.

Woven matting is very rarely found in use. The walls of every hut are made of basket-work, as are the beehives, which are more often than not under the shadow of some djacent butter-tree. Generally these hives are long cylinders, which midway have an opening about six inches square. The yield of honey, wild or half-wild, is very large, and of fine quality: the bees belong to the European species. The aroma of the Gardenia flowers is retained to a very palpable degree, but wherever the Candelabra-euphorbia happens to be abundant, the honey partakes of the drastic properties of its poisonous milk, and has been the cause of the natives being reproached with the intention of poisoning the Nubians.

In consequence of the people being so much engrossed at certain periods of the year by their hunting and fishing, the manufacture of fish-nets, creels, and snares, makes an important item in their industrial pursuits. For the most part all the twist, the bird-snares, and the fishing-lines are made from the fibres of bast, which are so plentiful in the cultivated Crotalaria and the Hibiscus. For inferior purposes the common lime-like bast of the *Grewia mollis* is made to suffice. The *Sanseviera guineensis* is not less abundant, but the bast which it yields, although very fine, is not very enduring. It is generally very black through having been left to lie upon the dark soil of the marshes, and is only used for making a kind of kilt like a horse's tail, which the women wear behind from a girdle about their waist. Cotton-shrubs are planted only by the Dinka, who make their fishing-lines of the material which is thus provided.

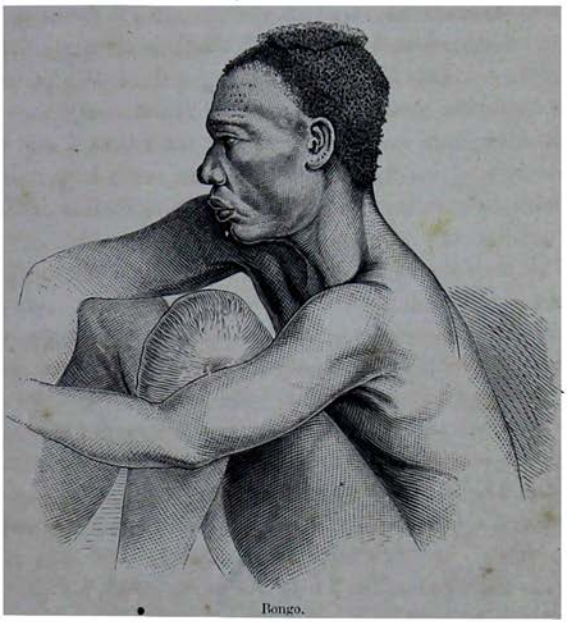
The manufacture of the pottery all falls to the care of the women, who do not shrink from the most difficult tasks, and, without the help of any turning-wheel, succeed

in producing the most artistic specimens. The larger water-bottles are sometimes not less than a yard in diameter. The clay water-pots are ordinarily of a broad oval shape, adapted for being carried on the head with the narrow end resting on a kind of porter's knot, which is made either of leaves or plaited straw. Handles are uniformly wanting: for, whatever may be the purpose to which the vessels are applied, whether for holding water or oil, for boiling or for baking, the material of which they are made contains so large a quantity of mica (which the natives do not understand how to get rid of), that it is very brittle, and the imperfect baking in the open air contributes to this brittleness. To compensate for the lack of handles by which the vessels might be lifted, their whole outer surface is made rather rough by being ornamented by a number of triangles and zigzag lines, which form all manner of concentric and spiral patterns. The gourd-platters and bottles are generally decorated with different dark rows of triangles. A large amount of labour is expended upon the manufacture of clay bowls for pipes, which are often really elaborate, and have generally quite a European character; very often their design consists of a human head, and these are so treasured as works of art, that their possessors cannot be induced to part with them at any price.

The preparation of skins for leather aprons and similar purposes has hitherto been limited amongst the Bongo, as probably amongst all the heathen negroes, to the simplest mechanical process of kneading and fulling by means of ashes and dung, which is followed up by a liberal application of fat and oil till a sufficient degree of softness and pliancy is attained. Recently from the Nubians the use of tan has become generally known, and it may not unreasonably be conjectured that the method of using it will gradually extend from the north of Africa towards the south, in the

same way as it has spread upwards from the Cape. Previous to their contact with Europeans, none of the southern people of Africa had discovered the use of tan, although the skins of their animals were a very important item in their economy. In Bongoland at present the bark of the Gere (*Hymenocardia Heudelotii*) is what is most frequently employed, and the red tan it yields is found to be very effectual.

We have now to notice the apparel and general external aspect of the people, which is as important in its way as the outline of any natural object, such as the growth and foliage of trees. In default of proper clothing, various disfigure-



Bongo.

ments of person play an important part, and the savage is voluntarily even more of a slave to fashion than any of the most refined children of civilization. Here, as in every

other quarter of the globe, the male sex desires to be externally distinguished from the female, and they differ widely in their habits in this respect. There is, however, one ugly custom which is common to both sexes throughout the basin of the Gazelle, which consists in snapping off the incisors of the lower jaw, an operation which is performed as soon as the milk teeth have been thoroughly replaced by the permanent. Upon the south borders of the country, near the Niam-niam, this custom ceases to be exactly followed, and there it is the habit, as with the Niam-niam themselves, instead of breaking them off, to file some of the teeth, and indeed sometimes all of them, into sharp points. Occasionally the natives file off the sides of the upper teeth as well as clip off the lower; nor is it an uncommon thing for gaps to be opened at the points of contact of the central upper teeth, whilst every now and then individual cases occur where interstices have been made in the sides of all the four front teeth large enough to admit a good-sized toothpick. Circumcision is unknown throughout the entire river-district.

The men do not go about in a condition so naked as either the Dyoor, the Shillooks, or the Dinka, but they wear an apron of some sort of skin, and recently have adopted a strip of stuff, which they fasten to the girdle that is never missing, allowing the ends to hang over before and behind. All the sons of the red soil, as the Bongo, the Mittoo, the Niam-niam, and the Kredy, are called "women" by the Dinka, because amongst them the females only are protected by any covering of this description. The Bongo women on the other hand, and especially those who reside on the highlands, obstinately refuse to wear any covering whatever either of skin or stuff, but merely replenish their wardrobe every morning by a visit to the woods; they are, therefore, in respect of modesty, less particular than the women of the Dinka; a supple bough with plenty of leaves,

more often than not a bough of the Combretum, and perhaps a bunch of fine grass, fastened to the girdle, is all they consider necessary. Now and then a tail, like a black horse-tail, composed of the bast of the Sanseviera, is appended to the back of the girdle in a way that has already been mentioned. The rest of the body is allowed by both sexes to be entirely unclad, and no addition to the costume is ever seen, except we should reckon the feathered head-gear, which is exhibited on the occasion of a feast or a ball.

As a rule the hair of both men and women is kept quite short, and not unfrequently is very closely shorn, the principal exception being found in the south, where the habits of the Niam-niam have extended their influence into the Bongo territory, and both men and women wear tufts and braids of a length approximating to that of their neighbours.

It may possibly be imagined that the extremely primitive covering of the Bongo women irradiates them with something of the charm of Paradise; but a very limited experience will soon dispel the rapture of any illusion of the kind. All full-grown women attain such an astounding girth of body, and acquire such a cumbrous superabundance of flesh, that it is quite impossible to look at them without observing their disproportion to the men. Their thighs are very often as large as a man's chest, and their measurement across the hips can hardly fail to recall the picture in Cuvier's Atlas of the now famous "Hottentot Venus." Shapes developed to this magnitude are no longer

Bongo Woman.

the exclusive privilege of the Hottentots; day after day I saw them among the Bongo, and they may well demand to be technically described as "Steatopyga." In certain attitudes, as for instance when they are carrying their heavy water-jars upon their heads, they seem to assume the shape of an inverted S. To their singular appearance the long switch tail of bast very much contributes, and altogether the profile of a fat Bongo woman is not unlike that of a dancing baboon. I can vouch for it that women who weigh twenty stone are far from scarce.

Very few are the people of Central Africa amongst whom the partiality for finery and ornaments is so strongly shown as with the Bongo. The women wear on their necks an accumulation of cords and beads, and not being fastidious like their neighbours, will put on without regard to shape or colour, whatever the market of Khartoom can provide. The men do not care much for this particular decoration, but prefer necklaces, on which they string some of those remarkable little fragments of wood which are so constantly found in every region of Africa. With the bits of wood hang fragments of roots, which are in form something like the mandrake, which, in Southern Europe, has been the subject of so strange a superstition. Alternating with the roots and wood are the talons of owls and eagles, the teeth of dogs, crocodiles, and jackals, little tortoise-shells, the claws of the earth-pig (*Orycteropus*), and in short any of those objects which we are accustomed to store in the cabinets which adorn our *salons*. They appear to supply the place of the extracts from the Koran which, wrapped in leather sheathes, the Nubians wear by dozens about their person; anything in the shape of an amulet being eagerly craved by every African.

Not unfrequently the men deck themselves out in females' ornaments. Many cover the rims of their ears with copper rings and crescents; others pierce the upper lip like the women, and insert either a round-headed copper nail or a

copper plate, or, what is still more general, some rings or a bit of straw. The skin of the stomach above the waist is often pierced by the men, and the incision filled up with a bit of wood, or occasionally by a good-sized peg. On the wrist and upper part of the arm they wear iron rings of every pattern; some rings are cut out of elephant and buffalo hide, and look almost as though they were made of horn. The "dangabor," an ornament composed of a series of iron rings, and worn on the lower portion of the arm, has been already described.

The Bongo women delight in distinguishing themselves by an adornment which to our notions is nothing less than a hideous mutilation. As soon as a woman is married the operation commences of extending her lower lip. This, at first only slightly bored, is widened by inserting into the orifice plugs of wood gradually increasing in size, until at length the entire feature is enlarged to five or six times its original proportions. The plugs are cylindrical in form, not less than an inch thick, and are exactly like the pegs of bone or wood worn by the women of Musgoo. By this means the lower lip is extended horizontally till it projects far beyond the upper, which is also bored and fitted with a copper plate or nail, and now and then by a little ring, and sometimes by a bit of straw about as thick as a lucifer-match. Nor do they leave the nose intact: similar bits of straw are inserted into the edges of the nostrils, and I have seen as many as three of these on either side. A very favourite ornament for the cartilage between the nostrils is a copper ring, just like those that are placed in the noses of buffaloes and other beasts of burden for the purpose of rendering them more tractable. The greatest coquettes among the ladies wear a clasp or cramp at the corners of the mouth, as though they wanted to contract the orifice, and literally to put a curb upon its capabilities. These subsidiary ornaments are not however found at all universally among the women, and

it is rare to see them all at once upon a single individual: the plug in the lower lip of the married women is alone a *sine quâ non*, serving as it does for an artificial distinction of race. According to the custom of the people, there need only be a trifling projection of the skin so as to form a flap or a fold, to be at once the excuse for boring a hole. The ears are perforated more than any part, both the outer and the inner auricle being profusely pierced; the tip of the ear alone is frequently made to carry half-a-dozen little iron rings. There are women in the country whose bodies are pierced in some way or other in little short of a hundred different places.

The Bongo women limit their tattooing to the upper part of the arm. Zigzag or parallel lines, or rows of dots, often brought into relief by the production of proud flesh after the operation has been accomplished, are the three forms which in different combinations serve as marks of individual distinction. The men tattoo themselves differently, and some of them abstain from the operation altogether. At one time the lines run across the breast and stomach to one side of the body; at another they are limited to the top of the arm, whilst it is not at all unusual for the neck and shoulder-blades to be tattooed.

Besides the ornaments that I have mentioned, the toilet of a Bongo lady is incomplete without the masses of iron and copper rings which she is accustomed to wear on her wrists and arms, and more especially on her ankles. These rings clank like fetters as she walks, and even from a distance the two sexes can be distinguished by the character of the sound that accompanies their movements. That human patience should ever for the sake of fashion submit to a still greater martyrdom seems almost incredible, though hereafter we shall have sufficient proof when we delineate the habits of the Mittoo, the neighbours of the Bongo, that such is really the case.

In Bongoland, as in all the northern parts of the territory

that I visited, copper of late years has attained a monetary value, and has become an accustomed medium of exchange. Glass beads are annually deteriorating in estimation, and have long ceased to be treasured up and buried in the earth like jewels or precious stones, being now used only to gratify female vanity. In former times, when the only intercourse that the Bongo held with the Mohammedan world was by occasional dealings with the Baggara Arabs, through the intervention of the Dembo, a Shillook tribe connected with the Dyoor, cowrie-shells were in great request, but these also have long since fallen out of the category of objects of value. Gold and silver are very rarely used as ornaments, even in the Mohammedan parts of the Eastern Soudan; it is therefore hardly a matter of surprise that to the Bongo, whose soil is singularly uniform in its geological productions, they should be all but unknown. The Bongo, moreover, have but little value for brass, differing greatly in this respect from their neighbours, the Dyoor.

Their weapons consist mainly of lances, bows and arrows, shields being very rarely used, and even then being appropriated from other neighbouring nations. Although the greater part of the population is at present quite unaccustomed to any warlike occupation, except when any of them chance to be employed in the raids upon the Dinka or in the Niam-niam campaigns, yet they still maintain a wonderful dexterity in the use of the bow and arrow, and we shall have occasion in another place to notice their performances in this respect. The large size of their weapons is remarkable; I saw many of their bows which were four feet in length, their arrows are rarely under three feet long, and on this account they are never made from the light reed-grass, but are cut out of solid wood. The forms of the arrow-heads also have a decided nationality stamped upon them. In the course of time I was easily able to determine at a glance the tribe to which any weapon belonged by certain characteristics, the

details of which would now engross more time and space than are at our command. It may be mentioned that the Bongo, like the negroes above Fesoglu, on the Upper Blue Nile, imbue their arrows with the milky juice of one of the Euphorbiæ. This species, of which I now for the first time collected some specimens, has been erroneously represented by Tremaux in the atlas of his travels * as *Euphorbia mamillaris*, but it is in fact one of the many Cactus-euphorbiæ for which the flora of Tropical Africa, and especially that of the drier regions, is distinguished, and is entirely distinct from the South African species. It is a branching, straggling shrub, varying in height from five to eight feet, at one time growing in large masses in the light woods, and then failing altogether for the space of several days' journey. Not only the larger branches, nearly two inches thick, but also the smaller boughs, are encrusted with a snowy white rind, covered with thick spiny protuberances, which stand singly under the eyes of the leaves. At the extremity of each bough is a bunch of fleshy succulent leaves, shaped like lances, and six inches in length. This species of Cactus-euphorbia (*E. venefica*) is termed by the Bongo "bolloh," in contradistinction to "kakoh," their name for the larger sort (*E. candelabrum*), which is common in the country, but of which the milky juice is far less dangerous than that of the "bolloh," for if this be applied in a fresh condition to the skin, it results in a violent inflammation. It is, however, my opinion that this juice, as it is used by the Bongo, being spread in a hard mass over the barbs and heads of the arrows, can do very little harm to the wounded, as when it is once hard it is difficult to melt, and there cannot possibly be time for it to commingle with the blood after a wound has been made by an arrow.

We may now turn our attention to the Bongo games,

* Tremaux: 'Voyage Pittoresque au Soudan.' Tab. XIV.

which are as original and primitive as their music. One of these games, as forming excellent training for the chase, deserves some especial notice. A number of men are provided with pointed sticks made of hard wood, which they use as lances. They form a large ring, and another man who has a piece of soft wood attached to a long string, runs round and round within the circle. The others then endeavour with their pointed sticks to hit the mark whilst it is being carried rapidly round. As soon as it is struck it falls to the ground, and the successful marksman is greeted with a loud cheer. Another game requires no less calmness and dexterity. A piece of wood bent into a crescent has a short string attached to the middle; this wood is then hurled by the one end of it with such violence to the earth that it goes spinning like a boomerang through the air. The players stand face to face at a distance of about twenty feet apart, and the game consists in catching the wood by the string, a performance that requires no little skill, as there is considerable danger of receiving a sharp knock. Both games might, under some modifications, admit of being adopted into our rural sports.

Turning now to the national manners, customs, and ideas, I profess that they are subjects of which I must treat with considerable reserve, since my residence as a stranger for two years amongst these savages only gave me after all a very superficial insight into the mysteries of their inner life. Since, however, the accounts of eye-witnesses, who knew the land in its primitive condition, seem to accord with and to corroborate my own observations, as well as the information I obtained from the Bongo themselves, I am in a position to depose to some facts, of which I must leave the scientific analysis to those who are seeking to cultivate the untried soil of the psychology of nations.

Elsewhere, and among other nations with whom I became acquainted, the number of a man's wives was dependent on

the extent of his possessions, but amongst the Bongo it seemed to be limited to a maximum of three. Here, as in other parts of Africa, a wife cannot be obtained for nothing, even the very poorest must pay a purchase price to the father of the bride in the form of a number of plates of iron; unless a man could provide the premium, he could only get an old woman for a wife. The usual price paid for a young girl would be about ten plates of iron weighing two pounds each, and twenty lance tips. Divorces, when necessary, are regulated in the usual way, and the father is always compelled to make a restitution of at least a portion of the wedding-payment. If a man should send his wife back to her father, she is at liberty to marry again, and with her husband's consent she may take her children with her; if, however, her husband retains the children, her father is bound to refund the entire wedding-gift that he received. This would be the case although ten years might have elapsed since the marriage. The barrenness of a woman is always an excuse for a divorce. In cases of adultery, the husband endeavours to kill the seducer, and the wife gets a sound flogging. Whoever has been circumcised according to the Mohammedan law, cannot hope to make a good match in Bongoland.

A Bongo woman, as a rule, will seldom be found to have less than five children: the usual number is six, and the maximum twelve. In childbirth she is supported with her arms on a horizontal beam, and is in that position delivered of the child; the navel-cord is cut very long with a knife, and always without a ligature. No festivities are observed on the occasion of a birth. The infants are carried on the mothers' backs, sewn up in a bag of goat's-hide, like a water-bottle. The children are kept at the breast until they have completed their second year, weaning being never thought of until they can be trusted to run about. In order to wean a child, the mother's breast is smeared with some acrid matter, and the

bruised leaves of some of the *Capparidæ* are mixed with water to a pulp, and have the effect of drying up the milk.

Among the Bongo and the neighbouring nations there is a custom, manifestly originating in a national morality, that forbids all children that are not at the breast to sleep in the same hut with their parents; the Bongo in this respect putting to shame many of those who would boast of their civilization. The elder children have a hut appropriated to themselves, but take their meals with the rest of the family. In addition to this custom there is the universal rule, as with ourselves, that no matrimonial alliance takes place until the youths are about eighteen and the girls about fifteen years of age.

In the disposal of their dead, the customs of the Bongo are very remarkable. Immediately after life is extinct, the corpses are placed, like the Peruvian mummies, in what may be described as a crouching posture, with the knees forced up to the chin, and are then firmly bound round the head and legs. When the body has been thus compressed into the smallest possible compass, it is sewn into a sack made of skins, and placed in a deep grave. A shaft is sunk perpendicularly down for about four feet, and then a niche is hollowed to the side, so that the sack containing the corpse should not have to sustain any vertical pressure from the earth which is thrown in to fill up the grave. This form of interment is also prescribed in the law of Islam, which, in this and many other cases, has probably followed an African custom. The Bongo have a striking practice, for which, perhaps, some reason may be assigned, of burying men with the face turned to the north and women to the south. After the grave is filled in, a heap of stones is piled over the spot in a short cylindrical form, and this is supported by strong stakes, which are driven into the soil all round. On the middle of the pile is placed a pitcher, frequently the same from which the deceased was accustomed to drink his water.

The graves are always close to the huts, their site being marked by a number of long forked branches, carved, by way of ornament, with numerous notches and incisions, and having their points sharpened like horns. Of these votive stakes I saw a number varying from one to five on each grave. The typical meaning belonging to these sticks has long since fallen into oblivion, and notwithstanding all my endeavours to become acquainted with the Bongo, and to initiate myself into their manners and customs, I could never discover a satisfactory explanation. The sticks reminded me of the old English finance-budgets in the time of William the Conqueror. In answer to my inquiries, the Khartoomers merely returned the same answer as they did to my predecessor, Heuglin; they persisted in saying that every notch denoted an enemy killed in battle by the deceased. The Bongo themselves, however, repeatedly declared that such was by no means the case, and quite repudiated the idea that they should ever think of thus perpetuating the bloodthirstiness of the dead. The neighbouring Mittoo and Madi adopt very much the same method of sepulture. The memorial-urns erected over the graves of the Musgoo remind the traveller of those of the Bongo. Whenever a burial takes place, all the neighbours are invited to attend, and are abundantly entertained with merissa. The entire company takes part in the formation of the grave, in the rearing of the memorial-urn, and in the erection of the votive stakes. When the ceremony is finished, they shoot at the stakes with arrows, which they leave sticking in the wood. I often noticed arrows that had been thus shot still adhering to the sticks.

The Bongo have not the remotest conception of immortality. They have no more idea of the transmigration of souls, or any doctrine of the kind, than they have of the existence of an ocean. I have tried various ways and means of solving the problem of their inner life, but always without success. Although the belief in immortality may be indi-

genous to Africa, I should question whether the ancient Egyptians did not in their religious development obey the promptings of the Asiatic East. At any rate, those statements are incorrect which would endeavour to explain the dull resignation displayed by the victims of human sacrifice in Dahomey by a theory of their belief in immortality. All religion, in our sense of the word religion, is quite unknown to the Bongo, and, beyond the term "loma," which denotes equally luck and ill-luck, they have nothing in their language to signify any deity or spiritual being. "Loma" is likewise the term that they use for the Supreme Being, whom they hear invoked as "Allah" by their oppressors, and some of them make use of the expression, "loma-gobo," *i.e.*, the superior, to denote the God of the "Turks." The almost incomprehensible prayers of the Mohammedans are called by the Bongo "malah," which has evidently some connection with the word "Allah" that is generally repeated over and over again in all the devotions of the Nubians.

If any one is ill, his illness is attributed to "loma," but in the event of anybody losing a wager or a game, or returning from a hunting adventure without game, or coming back from war without booty, he is said to have had "no loma" (loma nya), in the sense of having no luck.

Quite amazing is the fear which exists among the Bongo about ghosts, whose abode is said to be in the shadowy darkness of the woods. Spirits, devils, and witches have the general appellation of "bitaboh;" wood-goblins being specially called "ronga." Comprehended under the same term are all the bats (especially the *Megaderma frons*, which flutters about from tree to tree in broad daylight), as likewise are owls of every kind (*Strix leucotis* and *Strix capensis* being here the chief); and besides these the Ndorr (*Galago senegalensis*), a kind of pseudo-simia, with great red eyes and erect ears, which drags out a gloomy existence in the cavities of hollow trees. There are, too, prowling beasts of night, for

which they entertain the utmost dread, regarding them with superstitious awe. To ward off the evil influences of these spirits, the Bongo are acquainted with no other means except the magical roots in which the professional sorcerers trade, in a similar way as the Mohammedan priests of the Soudan in their amulets and sentences from the Koran. Very seldom are any attempts made to expel the spirits by the means of exorcism, which is turned to great account by the Dinka magicians. The institution of the "Cogyoor" is here called "belomah," but whenever it is necessary to have an invocation over a sick patient, they more often than not send for a professional wizard from the neighbouring Dinka.

Good spirits are quite unrecognised, and, according to the general negro idea, no benefit can ever come from a spirit at all. They affirm that the only thing they know about spirits is that they do mischief, and certain it is that they have no conception either of there being a Creator, or any kind and ruling power above. They assert that there is no other resource for obtaining communication with spirits, except by means of certain roots, which may be of service likewise in employing the powers of evil to inflict injury on others. To their knowledge of this magic may be attributed much of the influence which the native chiefs, independently of their authorised rule, exercise over the mass of the people in their districts. This may be witnessed among the Bary on the Bahr-el-Gebel, and a hundred other tribes, who yield the greatest deference to the controllers or captains of their communities. The practice of fetching down rain is never pretended to by the Bongo chiefs, and may be said to be absolutely unknown; but probably this may rise from the climate so rarely making it necessary to put their skill in this respect to the test.

All the very old people of either sex, but especially the old women, are exposed to the suspicion of allying themselves to wicked spirits, for the purpose of effecting the injury and

detriment of others. Old folks, so the Bongo maintain, wander through the forest-glades at night, and have only to secure the proper roots, and then they may apparently be lying calmly in their huts, whilst in reality they are taking counsel with the spirits of mischief how they can best bring their neighbours to death and destruction. They dig for roots, it is continually said, that they may have the means of poisoning those around them. Whenever any case of sudden death occurs, the aged people are held responsible, and nothing, it is taken for granted, could be more certain than that a robust man, except he were starved, would not die. Woe to the old crones, then, in whose house the suspected herbs and roots are found! though they be father or mother, they have no chance of escape.

A genuine and downright belief in witches has long been and still continues as deeply seated here as in any spot upon the face of the earth, and nowhere are prosecutions more continually being instituted against them. As matter of fact, I can affirm that really aged folks among the Bongo are comparatively scarce, and that the number of grey-headed people is, by contrast, surprisingly large amongst the neighbouring race of the Dyoor, who put no faith at all in any witchcraft. The Nubians are not only open to superstitions of their own, but confirm the Bongo in all of theirs. In the Eastern Soudan, which is a Mohammedan country, the conversation will constantly turn upon the "sáhara" (*i. e.*, the witches), and no comparison is more frequent than that which likens the old women to hyænas: in fact, many of the people hold hard and fast to the conviction that the witches are capable of going out at night, and taking up their quarters inside the bodies of these detestable brutes, without any one being aware of what is happening. It chanced, during my stay in Gallabat, that I killed one out of a herd of hyænas that was infesting the district; my fate, in consequence, was to be loaded with reproaches on the part of the

Sheikh, who informed me that his mother was a "hyæna-woman," and that I might, for all I could tell, have shot her. After this I was not so surprised as might be expected when Idrees, the governor of Ghattas's Seriba, boasted in my presence of his conflicts with witches, bragging that in one day he had had half a dozen of them executed. An occasion shortly afterwards arose, when Idrees was contemplating putting two old women to death at the desire of some Bongo, and the only scheme I could devise to make him desist from his purpose, was by threatening him that, in the event of the women being executed, I would poison his water-springs.

But, in this dread of witches, the whole superstition of the Bongo culminates and exhausts itself; and we Europeans may well ask what real right have we, with all our advancement in knowledge, to presume to reproach them? We cannot resist the impression that these poor Bongo are infinitely more free from hundreds of superstitious fallacies than many of those who boast of their civilization; much more so, for instance, than the Mohammedans of the Soudan, where the idlest of superstitions prevail in every household. Let nature be free, and the germs of energy in man's spirit will develop themselves, without overstepping their proper limits, in trustful dependence upon the presiding spirit which controls all thought. That the spirit of man, moreover, revolves in a circle, is demonstrated by the old man becoming again a child. A philosopher might fairly speculate (in the spirit of Bernardin de St. Pierre, when he advocated a worship of Nature) whether this land would not have been happier if the Moslems had never set foot upon its soil. They brought a religion that was destitute of morality; they introduced contagion rather than knowledge; they even suppressed the true doctrines of Mohammed their prophet, which would have enfranchised the very people whom they oppressed, and have raised them to a condition of brotherhood, and of equality.

The method of proceeding among the Bongo with the sick and wounded is invariably of the very simplest character. When the disorder is internal, and the origin cannot be detected, the treatment consists merely in liberal applications of very hot water. The patient is stretched upon the ground, and sprinkled by means of leafy boughs with boiling water from vessels that are placed close by. Somewhat more expert is their proceeding in the case of the wounded. It once chanced that I saw a group of sufferers brought back from one of the raids that had been made into the territory of the Dinka. The wounds had nearly all been inflicted by the lances of the adversary. With remarkable fortitude the patients all submitted to the practice of the country, which consisted in the introduction of a number of setons, made of the strong and fibrous bast of the grewia, into the injured parts, in order to reduce the inflammation. Amongst others, I saw a knee, which was immensely swollen, subject to the operation of being pierced in every direction by setons of this sort, until it was larded like a roast hare. With the exception of red ochre the Bongo, like most of their neighbours, are not acquainted with any mineral which they can apply to a wound, either as a reducent or an antiseptic. As medicines to accelerate the natural processes of cure, they make use of the astringent bitter barks of certain trees like the Hymenocardia, the Butyrospermum, and the Prosopis, which are here known as the "gere," the "kor," and the "göll." Syphilis, which now makes its insidious progress, was quite unknown amongst these poor savages previous to the settlement amongst them of the Nubians, and against its mischief the only specific employed is the bitter bark of the Heddo-tree (*Anogeissus*), one, however, which undoubtedly is utterly useless for the purpose.

The misshapen and crippled are entirely unknown amongst these unsophisticated children of Nature. But in a country where, even with the best attention on the part of a mother,

every child must be exposed to the perils which necessarily are associated with existence in a wilderness, how should it be possible for a cripple to stand out the battle of life? As freaks of nature, every now and then there may be seen some dwarfs, and I presume that some mutes may occasionally be found, as there is a word ("mabang") in their language to express the defect in the faculty of speech.

The insane ("bindahko") are shackled hand and foot; and avowedly with the design of cooling and soothing their passions, they are thrown into the river, where they are immersed by practised swimmers. If this remedy should prove of no effect, the patient is put into confinement, and dieted by the relatives; but generally the lot of a maniac is far happier than that which befalls an aged man, however innocent. To maintain the strength of invalids, certain kinds of flesh are prescribed, and a particular value is attributed to the flesh of the Gullukoo (*Tmetoceros abyssinicus*), a kind of rhinoceros hornbill, which has a detestable flavour, as odious as hemlock.

The dialect of the people throughout the whole country exhibits very little diversity; the best evidence for this is afforded by the perfect uniformity of expression in every part of the land for all natural objects whatever; whilst even in dealing with conceptions of an abstract character, there is little fear of being misunderstood. The language altogether has a harmonious ring, abounding in the vowel sounds of *a* and *o*, as the name of the people indicates; it is very simple in its grammatical structure, and at the same time it presents a great variety of terms for all concrete subjects. The vocabulary that I compiled contained nearly one thousand distinct expressions.

The etymology of connected words and the analysis of separate idioms afford considerable interest, and transport the student right into the ingenuous world of their natural life. The more common of our abstract ideas such as *spirit*,

soul, hope, and *fear,* appear to be absolutely wanting, but experience shows that in this respect other negro tongues are not more richly provided by nature. The labours of missionaries in translating the Scriptures have notoriously introduced into the written language a number of elevated idioms and of metaphorical ideas which very probably in a few generations may be more or less incorporated into the tongue, but to the student of language who shall make the gleanings these introductions will be a mere refuse, and the only subject of any scientific interest will be the speech of the people as it was while it remained intact and unaffected by innovation.

Instances of the indirect method which is employed on the part of the Bongo to express any abstract idea may here be given. The monosyllable "firr," for example used in combination with other words, answers the purpose of expressing any of the following ideas: will, love, pleasure, taste, or speech. The true conception which would appear to be the original force of the little word, is first the will, and then the expression of that will by means of the tongue. The phrase for "I wish it," would be "firr nahamah," which is literally, "The will is in my stomach."

Nor is it uninteresting to notice the various equivalents which are found of one and the same word. "Mahee" means "lance" and "meat" in general, and is a collective expression for antelopes of every kind; "attamatta" is employed equally for what is "bitter" and what is "annoying;" "dill" implies either a "shadow" or a "cloud;" "gimah" is used indifferently for either "a son" or "a boy," and "goah" for either "a pit" or "deep." "Helleleh" simply means "wind" or "air," but by reduplication "helleleh-helleleh," implies whatever is "light." Either "rain" or "the sky" may be indicated by the word "hetorro," and "ndan" not merely signifies "night," but is used for "to-day." This last mode of expression has been transferred from the African to

the Arabic of the Eastern Soudan," where "fee lehle" means either "by night" or "this very day."

The disposition which is ever manifested amongst the untutored children of nature to represent certain animals by imitating the sounds they utter, is extended amongst the Bongo to describe a variety of inanimate objects. As examples of this kind of nomenclature I may mention "golongolo" as their name for a "bell," "gohi" as their name for a "cough," "kullulluh" for a "ball," and "marongonn" for "snoring." The name they give a "cat" is "mbriow" differing little in its pronunciation from "mew."

There is a kind of poetry which underlies many of their expressions, and which invests some objects with a certain charm of indefiniteness; thus for example they call a leaf "mbillee-kaggah," "an ear of the tree," and a man's chest they name "doah kiddi," or "the capital of the veins."

The speech of a people is very often indicative of the predominating character of their pursuits. By the name of "mony," which originally meant the common sorghum, which is the staple of their produce, the Bongo, being an agricultural people, have come to denote not so much the particular corn, as eatables of any description. They have, moreover, adopted this word as the root of a verb which is conjugated. In a way corresponding to this the Niam-niam, who are mainly addicted to hunting, give a very comprehensive meaning to their word "push-yo," which signifies "meat." Of almost infinite variety are the names of the different individuals among the Bongo. I had opportunities of making inquiries whilst I was measuring nearly a hundred of the people, and I do not think that I found more than five names that occurred more than once. As a regular rule parents name their children after trees or animals, or some object in nature, and it is quite exceptional for any personal peculiarity to be associated with the appellation.

In the labyrinth of African culture it is very difficult to

disentangle the hundred threads which lead up to the centre from which they have been all unwound. Not a custom, not a superstition is found in one part which is not more or less accurately repeated in another; not one contrivance of design, not one weapon of war exists of which it can be declared that it is exclusive property of any one race. From north to south, and from sea to sea, in some form or other every invention is sure to be repeated; it is "the thing that has been." The creative hand of Nature alone produces what is new. If we could at once grasp and set before our minds facts that are known (whether as regards language, race, culture, history, or development) of that vast region of the world which is comprehended in the name of Africa, we should have before us the witness of an intermingling of races which is beyond all precedent. And yet, bewildering as the prospect would appear, it remains a fact not to be gainsaid, that it is impossible for any one to survey the country as a whole without perceiving that high above the multitude of individual differences there is throned a principle of unity which embraces well nigh all the population.

Such a conclusion has been amply borne out by the preceding delineation of the Bongo, who form an element in that unity. We cannot take a retrospect of the particulars which have been now detailed about them, without the question arising as to which of the other races of Central Africa most nearly resemble the Bongo. Any answer to this question that could not be invalidated would afford hints invaluable for the investigation of the latest movements among African nations; but I must confess that I am only hazarding an opinion which I cannot establish, when I name the countries about Lake Tsad as being those in which the most marked similarity in habit to the Bongo might be expected, and the tribes to which I would more particularly allude are the Musgoo, the Massa, the Wandala, and the Loggon.

I conclude by repeating the comparison which I made at the beginning between the existence of a people and a drop of water evaporating in the sea. Ere long, the Bongo as a people will be quite forgotten, superseded by a rising race. The time cannot be far off when this race, so gifted and so impressionable, shall be known no more. The domination over the people which is contemplated in Egypt cannot fail to effect this result, and it is a destiny that probably awaits all the rest of the African races. However much the Nubian may tyrannize, he still leaves the poor natives a portion of their happiness. But there is still a more distant future: after the Nubian comes the Turk, and he takes all. Truly it is not without reason that the proverb circulates in every district, "Where the Turk has been no grass will grow."

CHAPTER VIII.

Calamities by fire. Deliverance and escape. Six women-slaves burnt. Barterings. Domestication of wild-cats. Plague of cockroaches. Pillen-wasps. Agamæ and chameleons. Fever. Meteorology. Solar phenomenon. A festal reception with an unfortunate result. Disturbance of rest at night. Murmuring of prayers. Jewish school. Orgies and drum-beating. Casting out devils. Resolve to follow Aboo Sammat. Start towards the south. Passage of the Tondy. Character of the forest. The water-bock. Scenery by night. Shereefee's attack. Seriba Duggoo. Consequences of the steppe-burning. Seriba Dagguddoo. Burnt human bones and charred huts. Tropics in winter. Two kinds of ant-hills. Arrival in Sabby. Nocturnal festivities of the Bongo. Desolation of the country. Goat-suckers. Abundance of game. The zebra-ichneumon. The spectral mantis. Lions. Wonderful chase after hartebeests. Snake and antelope at a shot.

So satisfactory was the condition of my health that it appeared to me entirely to confute the opinion entertained by Europeans that a prolonged residence in the tropics is destructive alike of physical and moral energy. For those probably who live in indolent repose, and who are surrounded by all the appliances of domestic comfort, who, so far from undertaking the trouble of a journey, have scarcely the activity to take a walk, there may be some ground for the presumption; and more particularly may this be the case in Mohammedan countries where slothfulness and *laissez faire* are as contagious as gaping is all the world over. But nothing of the kind is to be found for a traveller whose elasticity is kept at all on the stretch, and who is conscious of not having a minute to spare; the exercise of his faculties will keep them in vigour as full as though he were still on his native soil. For my own part, I could not help thinking

of the contrast between the rainy season which I spent here and that which, in 1865, I had passed in Gallabat; now all was animated and cheerful; life seemed free from care; my health was unimpaired, and I enjoyed the most intimate converse with Nature; but then, on the contrary, it had been a perpetual struggle between getting well and getting ill, and I had never ceased to be haunted by the depressing influences of a weary spirit.

However happily my time in the Seriba glided on, still it was not altogether free from peril. An incident full of alarm occurred to me on the night of the 22nd of May. The rain was coming down in torrents, and about two hours after midnight a tremendous storm ensued. The thunderclaps rattling through the woods sounded like an avalanche, and coming rapidly one upon another, seemed to keep pace with the lightning which gleamed through the darkness of the night. Suddenly there was a shrieking of women's voices, and at the same instant the blackness of night was changed to the light of day, as the blaze of a burning hut flared up aloft. The flaming structure was only separated from my own quarters by my single granary. Aroused by the outcry I sprang up; for to be caught asleep in an edifice constructed of straw and bamboo is to be enveloped in fire, and is almost certain death. The hazard was very imminent; in a very few minutes my hut must apparently be in flames; the work of demolition began at once; my powder was conveyed without delay to a place of safety; my chests and my herbarium were then secured; all the smaller articles of my furniture were thrown into great waterproof coverings and dragged out *en masse*. Perhaps about half of my property had thus been placed out of jeopardy when we observed that the wind bore the flames in a different direction, and fortunately the light framework of the burning roof gave way and it soon fell in; saturated as the straw was with the rain it put a check to the further spreading of the flames. Now was the

time to draw our breath and look around; we could now give over our hurry and scurry, and examine the real condition of things. I stood almost petrified at the reflection how narrowly I had escaped coming to utter grief on this unlucky night; I thought how deplorable had been my lot if I had been reduced to a condition of nakedness and want in this inhospitable land; I became alive to the sense of shame with which I should have retraced my way back to Khartoom within a year, and with my task unfinished; I was dispirited; I knew not what might happen, and perhaps this fire was only a prelude to yet more bitter experience.

The tokkul which had been burnt down was hardly five-and-twenty paces from my very bed. There, struck by lightning, six female slaves had met their simultaneous death; a seventh had been untouched by the electric fluid, and had contrived, half dead from burning, to effect an escape from the flaming pile. When a clearance was made on the next morning, after the ashes had been removed, the bodies of the ill-fated women were found completely charred, lying closely packed together just as they had gone to sleep in the hut around its centre support, which had been the conductor of the lightning. They formed a ghastly spectacle, at which even the native negroes could *not* suppress a shudder, whilst the recently imported Niam-niam slaves made no disguise of the relish with which they scented the odour of the burnt flesh, as they helped to clear away the *débris*. Scarcely any incident could befall a traveller more disquieting than this; it had haunted me in my dreams all through my sojourn in the Soudan; forebodings of it had stuck to my fancy, and now it appeared to be well-nigh on the very point of literal fulfilment.

One of the Nubian soldiers had, amongst the six victims of the conflagration, to bewail the loss of his sweetheart. To such a degree did this bereavement prey upon him that he entirely lost his reason, and so gave a considerable amount of

trouble to the occupants of the Seriba. An instance of affection like this never came to my knowledge elsewhere in these districts.

As far as regards danger from fire, the settlement here was at a disadvantage when compared with various Seribas in which the huts are not crowded so closely together; but in other respects, such as the more complete security of the territory itself, the abundance of provisions, the rareness of mosquitoes, and the small number of white ants, this Seriba had recommendations which put every other in the shade. Very advantageous was the appearance at my door, morning after morning, of the neighbouring Dinka, who brought every variety of their productions for me to purchase. In this way I was kept amply provided not only with yams and earthnuts, the purest of oil and the finest of honey, but I was able readily to obtain all the corn I required for my retinue. Moreover, it happened not unfrequently that I had some natural production offered me of considerable rarity, and thus the edge of my botanical curiosity was kept continually sharpened. In the very depth of the rainy season by getting the eggs of some geese and bustards, and even of some ostriches, I managed to counterbalance the meagre produce of my poultry-breeding.

Of these opportunities of seeing considerable numbers of the natives gathered round me, I made the best use I could to obtain the measurements of their bodies, an achievement on which I had set my mind with some degree of pertinacity. At the end of one year's residence in the interior I had made a synopsis (under about forty heads) of the measurements of nearly two hundred individuals, but unfortunately very few of my memoranda are now forthcoming. During my intercourse with the natives I very often allowed what pictures I had to be exhibited, in order to satisfy their repeated inquiries. All they saw stirred up their unfeigned delight, and continually prompted them to ask in astonishment why they

had not learnt the same things from the "Turks," and to express their conviction that that must be a wonderful country where tools and guns were made. The indolent Nubians, too, would pay me visits most assiduously till I was absolutely weary of them. They would often make their appearance quite early and I could only disengage myself from them by letting them have my books and pictures about Africa to look through. The illustrations in 'Le Tour du Monde,' in Speke's 'Travels,' and in Baker's 'Hunting Adventures,' all alike furnished them with inexhaustible material for question and answer. They shouted their approbation aloud, and crowned their admiring estimate of any picture by crying out "bazyatoo" (the very facsimile), again and again. The name which Speke's book acquired in the Seriba was 'The History of King Kamrasi,' while they called Baker's work 'The Book of the Elephant Hunter.'

In the beginning of September I was able to make a despatch to the river of my treasures I had collected, and to forward them by way of Khartoom to Europe. I had upwards of forty packages, and to put them together and make them secure was the business of a good many days. Particularly laborious was it to sew them all upon skins, and still more laborious, I do not doubt, to rip them up again when they reached their destination; for during their transit across the parching desert, the hides are not unfrequently so dried up that they become as hard as tin. For the protection of my packages and to prevent the botanical contents being invaded by insects or gnawed by rats, I had no difficulty in providing the caoutchouc substance of the Carpodinus, the "Mono" of the Bongo. This I obtained in a fresh condition, when it has the appearance of a well-set cream, and washed it lightly over the linen or the paper like a varnish. Not an insect found its way through this coating, and my packages all arrived thoroughly uninjured in spite of their being a twelvemonth on their way. Less adapted for the purpose I

found both the milky sap of the fig and of the butter tree, because it is not so uniform in its character and does not admit of being spread so readily.

The produce of Ghattas's Company was this year four hundred loads, being somewhere about 230 cwt., which would be worth in Khartoom nearly 4000*l.* In order to reach this amount, certainly not less than three hundred elephants had been destroyed, and probably considerably more.

Although the ants at this spot did not abound in the wholesale way in which they did in many other Seribas, there were nevertheless plenty of inconveniences in my quarters, and like every other traveller I had to get accustomed to them as soon as I could.

My want of space was a great difficulty. I was hardly at all better off in the hut where I ordinarily lived than in an old overcrowded lumber room. I had no cupboards and no small chests, and consequently I was compelled to be ever packing up and unpacking my thousand bits of property. The framework, of my own construction, which reached up into the circular roof did something to increase my accommodation, and I hung bags upon it containing my clothes and my linen, and a whole host of little things besides I stuck into the straw thatch above. Under such circumstances, no wonder that I had perpetual conflict with rats, crickets, and cock-roaches, and that they were a constant source of annoyance.

The only method which was really an effectual guarantee for the protection of any articles from being gnawed to bits was to hang them up; but whenever at nightfall I had any packages which could not be suspended there was one device of which I made use, and which was tolerably successful in keeping rats at a distance. One of the commonest animals hereabouts was the wild cat of the steppes (*Felis maniculata*). Although the natives do not breed them as domestic animals, yet they catch them separately when they are quite

young and find no difficulty in reconciling them to a life about their huts and enclosures, where they grow up and wage their natural warfare against the rats. I procured several of these cats, which, after they had been kept tied up for several days, seemed to lose a considerable measure of their ferocity and to adapt themselves to an indoor existence so as to approach in many ways to the habits of the common cat. By night I attached them to my parcels, which were otherwise in jeopardy, and by this means I could go to bed without further fear of any depredations from the rats.

Quite helpless, however, did I appear with regard to the devastations of the crickets, which found their way through my stoutest chests, ate holes into all my bags, and actually fretted my very wearing-apparel and body-linen. Subsequently I received a supply of borax, and this turned out to be an adequate security against their mischief.

The encroachment of the wood-worms in the bamboos which composed my hut developed itself into a nuisance of a fresh sort. To myself it was a matter of great indifference whether the building collapsed sooner or later, but just at present it was a great annoyance to me that all day long there should be an unceasing shower of fine yellow dust, which accumulated on everything till it lay as thick as my finger, and almost exceeded the bounds of endurance.

Another noxious insect which was to be found in every hut was the Pillen-wasp (*Eumenes tinctor*). This was nearly two inches long, and had a habit of forming its nest in the straw right at the top of the circular roof. Associated with eight or ten others it made a huge cell, and flying in and out through the narrow doorway, which was the only avenue for light, it came into constant collision with my face. Its sting was attended by distracting agony far worse than the sting of any bee. Throughout the entire year I was baffled by these wasps, which were beautiful in colour, having wings of a fine violet blue. I made many attempts to destroy their

ingeniously-constructed nest, and only succeeded after catching them in a butterfly-net and killing them one by one.

Throughout the tropics the harmless kinds of lizards may invariably be reckoned amongst the settlers in every house. Prettily marked skinks (*Euprepes quinquelineatus* and *E. pleurostictus*) enlivened my abode, whilst the graceful gecko (*Hemidactylus verrucalutus*) clambered up and down the walls just as frequently as in Egypt and in Nubia. But more numerous than all were the sociable agamæ (*Agama colonorum*), which kept nodding their heads in a way that was extremely irritating to the Mohammedans, who fancied that it was the devil making fun of their prayers. I had previously repeatedly seen this species of the lizard in the overhanging rocky crags of the desert valleys on the Egyptian coast of the Red Sea; but here it appeared to lodge itself quite as freely in the huts as in the woods. The head of the male is of an orange-colour, and is easily detected from a considerable distance. Very ridiculous are their movements when any one approaches a tree upon which they are running up and down. They betake themselves to the farther side of the stem, and keep stopping at intervals, peeping out cunningly first from one branch and then from another, their large eyes beaming with a most knowing expression. Their favourite resort, however, in this district was the old woodwork of the palisades, and there they mustered in thousands.

I was very much surprised, at the beginning of the rainy season, at the large number of chameleons which at intervals clustered themselves upon the sprouting foliage. The common African sort grows to a very unusual size, and I saw several which could hardly be less than ten inches long. Scarcely less abundant is the smaller and slimmer species (*C. lævigatus*), which does not exhibit quite to the same extent the changes of its colour. Rolling its eyes in a very remarkable manner it answered the same purpose as the

agama, with its nodding head, of getting up a joke against the Mohammedan fanatics. "What is a chameleon like?" I used to ask them, and not over delighted were they when they were told that the chameleon, with its one eye up and the other eye down, was a faki looking up to God in heaven, but at the same time keeping a sharp look-out upon the dollars of earth.

Thoroughly free, as I have said, from fever, during March and April, I persevered in taking my daily dose of ten grains or more of quinine; but as the heat diminished, and as the rainy season at its height was not so full of miasma, I gradually diminished, and in June and July entirely gave up my uniform administration of the tonic. But quinine still remained my sole medicine, my only resort in every contingency. If ever I got a chill, if ever I was wet through, or was troubled with any symptoms of indigestion, I lost no time in using it, knowing that for any traveller in a region such as this, any indisposition whatever is simply a doorway through which fever insidiously creeps and effects its dangerous lodgment. Any sudden giddiness in the head, or any spasm between the shoulders, or any failure in the functions of the limbs were all, I do not doubt, warnings of the ill-omened visitor, which I accepted in time to avert. Not only, as I have remarked, were fevers here quite common, but my own attendant, who had accompanied me from Alexandria, was prostrated some days by a very serious attack, and his condition of health was so much impaired that he had to be sent back on the next return of the boats. There were others, too, of my own people who had to endure attacks of less severity.

Expecting, as I had been, a much larger fall of rain, I could not be otherwise than much surprised at the meteorological facts which were actually exhibited. Although the rainfall extends over a longer period, the total average fall of water is less here than it is either in Gallabat or in

Upper Sennaar, where the rain lasts only from the beginning of May to the beginning of October. There the rain, almost without exception, fell every night, and all night from sunset till daybreak; but here it was the result of experience that the rain ordinarily was to be expected between noon and night. All travelling consequently has to be accomplished before midday, and the journeyings are necessarily shorter than in the dry winter months. It may be taken as a rule that holds good very generally throughout the tropics that if the sun rises clear or becomes clear shortly after rising, there will pretty certainly be no rain for some four or five hours. In Gallabat it was considered rather a feat to walk during the rainy season from one house to another either in slippers or in Turkish shoes, but here, day after day, such protection for the soles of the feet was quite sufficient, even where the ground was not at all rocky.

European vegetables in Gallabat had generally been found to suffer from the excessive wet, and others had either run into weeds or in some way degenerated, but here, from May till August, we cultivated many sorts successfully, and made good use of the intervals which, sometimes for four or six days together, passed without any rain whatever. To confirm what I have said, I adduce the facts that in March 1869, in the centre of Bongoland (lat. 7° 20′ N.), the "Khareef" was opened by four little showers; in April there were seven considerable pourings; in May seven falls of rain, lasting several hours; in June ten, in July eleven, and in August twelve. These must not be reckoned as days of rain, for the truth is, an entire day of uninterrupted rain never once occurred. The rainfall only up to June was attended by tempests or thunderstorms, after which date the violence of them gradually and almost entirely abated. Heuglin in 1863 had made the same observation. At the end of July there ensued an entire change of temperature, and only in exceptionally hot afternoons did the heat ever

again reach the extreme point which it had done previously; but even at its maximum it had never exceeded 95° Fahr. in the huts, whilst in the open air it was ordinarily 2° lower. I could now rejoice in a degree of heat scarcely above what is common in our northern zone, and seldom registered a temperature above 77° Fahr. in my own quarters. This fall in the thermometer is very beneficial and refreshing to the European, whose skin, exhausted by repeated perspiration, is very often distressed by a perpetual nettlerash.

The earliest rain which I observed this year fell while I was still at the Meshera on the 2nd of March; and the 16th of that month was the date on which the wind altered its course, and for the first time deviated from its long-prevailing north-easterly direction.

The uniformity of climate in equatorial Africa contributes very much to extend the range of particular species of plants. To this may be added the absence of those mountain systems which elsewhere, as in Asia, traverse the continent in all directions. Without let or hindrance the trade-winds exert their influence over the entire breadth of this region. Any interruption of the rainy season between the two zenith positions of the sun, which in Bongo-land are some months apart, has never been authenticated. Although upon the north-west terraces of Abyssinia the rainy season might appear, through the influence of the mountains, to be obliterated or obscure, yet it could always be traced; but nevertheless the whole aggregate of circumstances which contribute to these precedents is not to be estimated during the transitory observations of one short sojourn.

Neither during the continuation of my wanderings towards the south did I find any indication which seemed to evidence that two rainy seasons had anywhere coalesced so as to become one continuous period of rain, which sufficed throughout the year to maintain an uninterrupted renewal of vege-

tation. Nowhere in the equatorial districts which I visited (not even in the territory of the Monbuttoo, of which the latitude is between 3° and 4° N.) did it appear that there ever failed a uniform period for foliage to develop itself. Apparent exceptions might be found where the condition of the soil is never otherwise than wet throughout the year; but even in this low latitude there is a dry season and a wet season, just as decided as in Nubia, twelve degrees further to the north.

Between five and six o'clock on the afternoon of the 18th of May, while I was absorbed in my writing, I was suddenly startled by the outcry of a number of my people calling me to make haste out and witness the singular appearance which was arresting their attention on the south-west horizon. Great masses of clouds were covering the declining sun, whilst all below the heavy cumulus the heavens gleamed with the golden shimmer of a glorious sunset. Like a pile from the mighty Alps, stern and imposing, surrounded by dazzling glaciers and by many an avalanche, the central clouds of this great gathering massed themselves in ponderous layers which rolled majestically to the north. Starting out abruptly from the brilliant glare of the setting sun, these layers on their upper edge distinctly assumed the form of three vast swellings, while around the margin of each of these there gleamed the light of an unearthly glory; colours of the richest hue combined to give an effect as though each of the projecting accumulations were circled by a rainbow. Midway between the vanishing violet of the bow and the sombre ridge of cloud streamed a flood of light which repeated itself upon the superior margin of the wondrous spectrum. In three directions (issuing not directly as from the sun in the centre of the mass, but as though two parhelia besides contributed their power) there rose separately from each of the three tumescent rolls of cloud shadowy beams of light embracing the whole

PHENOMENON ON THE 17TH OF MAY 1869. HALF-PAST FIVE P.M. LAT 7° 25'N

firmament above, whilst in addition to all this, there were secondary groups of beams diverging from the angles where the rainbow arches intersected. An appearance somewhat similar to these shadowed rays or streaks of alternate light and shade, resulting from the unequal masses of the floating clouds, has been recorded by Professor Tyndall as witnessed in Algiers. The colour of the rainbows on their edge nearest to the sun, and in consequence approximate to the clouds, was so remarkable that it could not fail to excite my attention. Altogether it was a spectacle not to be forgotten. The rainbow-like phenomenon had not the appearance of being an ordinary arch repeated thrice, but was one scallopped bow composed of three distinct but successive limbs: it continued for about five minutes, and allowed me ample time to make a sketch of its striking features.*

* The phenomenon here depicted is closely allied to those tinted halos which are seen in so much diversity and under so many modifications around both sun and moon. In Schumacher's 'Astronomische Jahrbücher' (Altona, 1823) Fraunhofer has detailed the theory of these halos, and has proved his assertions by many examples that had fallen under his own observation. Whenever the sun or the moon is surrounded by a halo, the sky is ordinarily veiled in light vapours. If the phenomenon is perfect, the rings of this halo are seen to be of the colours of the rainbow. Fraunhofer divides these halos into two classes: viz., halos of a small and halos of a large diameter. If the red tint is outside and away from the luminous body, as in the present case, he calls it a halo of the smaller kind; but if the red is inside and next to the luminous body, it is a halo of the larger kind. This latter case is closely allied to the phenomenon of parhelia. The cause of these tinted halos is to be found in a diffraction of light through globules of vapour, and Fraunhofer has given proof that the light, in passing across the edges of these globules, would assume an appearance of diffraction similar to that which would be caused by its passing through minute apertures. For the formation of a tinted circle it is necessary that the globules should be equally diffused and of an equal magnitude. If the globules were very irregular, there would be only a bright glare, because the eye would receive rays of various colours from one and the same spot in the atmosphere; then the result would be that the light would be white, as in the case under our notice it appeared directly round the outline of the cloud, and also beyond the outside ring of red, so that the coloured circle was bounded on each side by a rim of white light. The smaller the globules of vapour, the larger are the tinted rings, for according to the theory the diameters of the rings are in inverse ratio to those of the globules. According to another theory represented by Galle (Poggendorf's 'Annalen,' vol. xlix.), one

During September I found an opportunity to make a third excursion to the Tondy, and had the good fortune to make some valuable additions to my botanical store, but apart from this my days glided on without variety, and I have no episodes of interest to relate.

Fastened down as I was for the present to one spot, I had to limit my observations to its immediate neighbourhood, and accordingly with considerable perseverance and at the cost of some trouble, and, I may be permitted to add, of a good deal of soap, I went on taking the measurements of many of the natives, who I thought might render me service. There were hundreds of bearers, and after diligently reckoning them up and instituting comparisons based on written estimates and on a variety of portraits, I was able to satisfy myself as to the characteristic features of their nationality which they exhibit. I moreover devoted a considerable time to learn the dialects of the district, and found that the facility with which the different slaves had mastered Arabic in their intercourse with the Nubians was of great assistance to me in my endeavours.

Now and then there would occur incidents that were somewhat ludicrous. One day a visit from the superintendent of a distant Seriba was announced, and Idrees was all on the alert to give his colleague a fitting reception. The arrival was expected of Ali, the Vokil of Biselli, under whose guidance Miss Tinné had passed the most memorable year of her life. In readiness for the entrance of Ali into the Seriba, the whole armed force was drawn up in double

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cause of these tinted halos is the presence in the atmosphere of ice-crystals of microscopic minuteness; but this hypothesis seems confuted by the fact that similar phenomena have frequently been witnessed within the tropics (Alex. von Humboldt, Voyage II., p. 309). This phenomena of the 18th of May, 1869, was remarkable for the form of the tinted circle, which corresponded exactly with the accidental outline of the clouds, which presented a threefold curve, thus . Thus the entire rim of the cloud became a series of luminous sunlight points formed of globules of vapour, making a halo of the smaller class, and sending forth their own shadows.

line before the gate. Ali was not only Ali ("tall and strong") by name, but he was in fact a head taller than any of his retinue. Full of state, with majestic mien, with the turban of the believer upon his head and the splendid hezam of Tarablus around his loins, he was just entering the military avenue when the soldiers fired their salute. The discharge was rendered, and they all mutually smothered each other in smoke. But the echoes of the salute were hardly silent, and wreaths of smoke still hovered in the air, when all of a sudden the solemnity was interrupted by the cry of "Russahs! russahs!" (bullets, bullets), and one of the soldiers rushed from the ranks, dashed down his musket, and seemed bereft of his senses. In truth, his *vis-à-vis* had forgotten to remove the charge from his rusty old gun, and the shots that had been designed for the geese in some neighbouring marsh had terribly punished the legs of his unfortunate comrade. The poor fellow applied to me for assistance, but I could not help him otherwise than by a kind word. I had not in my possession any instruments to extract the shot, and so I did the best I could to pacify by quoting mysterious texts, and by commending him to the mercy of Allah.

Rarely did a week elapse without the repetition of some such mischance as this. Perpetually in peril myself of being shot, I was ever being called upon to exercise my surgical skill either in bandaging fractures, or in extracting balls great or small; but as most frequently the shots found their way into the legs of the sufferers, in the legs most frequently I allowed them to remain.

Although my fatigue by day made repose by night very essential to me, my rest was sadly disturbed by the habits of my people. Quite intolerable at times was the eternal babbling of their prayers, which, beginning in the evening hours, were wearily prolonged, and nothing could accustom me to the clamour which they made. They seemed at times

to drive me in my impatience well-nigh to distraction. Some priests had arrived from Darfoor, who surpassed all else in the clamour they raised. With a lot of gibberish utterly incomprehensible, through their antiquated pronunciation, to any of the Nubians, they proceeded to recite the verses of the Koran with the grinding monotony of a mill. My own people, however, devoted Mohammedans as they were, on these occasions took my part, and warned off the disturbers of my rest from the proximity of the hut. I cannot tell whether they were not such enthusiastic believers, or whether their animosity was excited by the bombastic erudition of the Foorians, but they set to work in earnest, and made a clearance as effectual as I had once seen accomplished by the officers of the liberal-tyrannical government of Muntass Bey in Suakin. That ruler, when I had last been residing in his town, had had the unparalleled audacity to send his Khavasses into the neighbouring mosque, and to threaten to make a free use of the kurbatch if the prayers at night were not promptly stopped. He sent a message to the effect that if the priests wanted to pray they need not shriek, for Allah could hear just as well without the outcry. The daring of such an intrusion had never been matched from the day of creation onwards.

Idrees, the superintendent of the Seriba, had eleven sons all nearly of the same age, a circumstance readily explained by his plurality of wives. For these youths, whom the children of other residents were allowed to join, he had instituted something like a regular Jewish school, and no one who has ever had the chance of witnessing the proceedings of such an institution can forget the sensation they left upon his ears. Four times in the course of the four-and-twenty hours, at intervals of four hours apart, does the chorus of voices in these Nubian schools break out in alternate humming, and buzzing, and shouting, occasionally varied by the didactic hammering

of the master, by the switch of his rod, and the consequent screams of the youngsters, which were invariably followed by a louder and livelier articulation. There is one school time just before sunset and another very shortly after, so that every attempt at repose is certain to be thwarted. However, I could always endure this disturbance with much more equanimity than the humbug of the prayers; for, however erroneous, according to our ideas, might be the method of instruction in school, yet its object at least was laudable.

Occasions there were when nightly orgies were all the rage, and the idle pretext under which these were maintained was that the plague of flies permitted no rest. The Nubians, when they had made themselves tipsy with their detestable merissa, had the habit of finding an outlet for their hilarity in banging on the kettle-drums which hung at the entrance of the Seriba. To me this abominable noise was a very thorn in the flesh, and as the huge drums were very near my quarters, and had broken my sleep often enough, I took the liberty of sprinkling the parchment with a sufficient quantity of muriatic acid, so that the next time they were drummed they split across. Till some new kettle-drums were provided I could slumber in peace.

Another interruption to a quiet night occasionally arose from the native wizards, who practised the mystery of casting out devils. I told them that they must be very indifferent charmers if they were unable to expel the devils by day as well as by night; but they did not appear to see matters at all in that light. One occasion there was in which, out of pure compassion, I permitted the proceedings to go on, although the noise was so extreme that it would never have been tolerated in the daytime. The wife of the Dinka interpreter in the Seriba had been long suffering under some chronic disorder, and he had undertaken a long day's journey to fetch a very celebrated conjuror or "Cogyoor" to treat her case. The incantation began in a strain which would try the

very stoutest of nerves: the strength of the wizard's lungs was astounding, and could have won a wager against a steam-trumpet. The virtue of the proceeding, however, centred upon this, and ventriloquism was called in to assist in producing a dialogue between himself and the devil which possessed the patient. I say the "devil," because the Biblical expression has accustomed us to the phrase, but I disapprove of the translation, and would rather say the "demon."

In the most penetrating tone, something like the cackling of frightened hens, only a thousand times louder, the sorcerer began the enchantment, which consisted of several acts. The first act lasted two hours without intermission, and unless it were heard it could never be imagined. I was assured that this introduction was quite indispensable—as a means of intimidating the devil and compelling him to reply, it could not by any means be omitted from the execution of the charm. The dialogue which followed between the wizard and the devil was carried on by the artifice of ventriloquism. The wizard made all kinds of inquiries as to the devil's name, the period of his possession of the woman, his proceedings, and his whereabouts, and then went on to ask about his lineage, his kinsfolk, and acquaintances. When for an hour or more the wizard had interrogated him till he had got all the answers he wanted, he set to work to provide the real remedy. Hurrying away into the wood, he got some root or herb, which perchance in many cases contributes to a cure. It all vividly reminded me of the clap-trap which advertisers and quacks are accustomed to employ, and how it may happen that they get hold of some simple and long-known material, which, under some marvellous name, they impose as a novelty upon the public. Puffing is part of their trade, and without a good deal of noise their business will not thrive in Europe any more than in Africa.

The rainy season in due time came to its end. For seven

months and a half I had now been quietly quartered in the Seriba of Ghattas; but a change was now impending, as I had resolved to quit my limited range and to attach my fortunes to the care of Aboo Sammat, whom I have already mentioned. Repeatedly he had invited me, at his own expense, to visit with him the Niam-niam lands, and I had determined to follow the advice of my people, who knew his character, and to accept his offer. I discovered that he had penetrated considerably further to the south than any other, and that he had more than once crossed that problematic stream of the Monbuttoo which was said to flow quite independently of the Nile system towards the west. The prospect of visiting the Niam-niam would be much more restricted if I were to remain attached to the expeditions of Ghattas's Company, as they had hitherto been confined to those nearest and most northerly districts of that country of which the first knowledge in Europe had been circulated by Piaggia.

I could not be otherwise than aware of the questionableness of giving up my safe quarters, and exchanging my security for the uncertain issues of a wandering life in Central Africa, but irresistible was the inducement to enlarge my acquaintance with the country and to find a wider field for my investigations. The season of the year was, moreover, quite in favour of pushing farther on than I had previously contemplated. Full of expectation, therefore, I turned my hopes towards the south, in an eastern direction, towards that untraversed region between the Tondy and the Rohl, which already is just as truly subject to the Khartoomers as that in which I had been sojourning.

In my immediate neighbourhood I had tolerably well exhausted the treasures of the botanical world; after the rains were over there was a comparative barrenness in the productions of nature. I made, indeed, my daily excursions, but they reached only to places which I had previously inspected. A sense of irksomeness began to predominate, and every tree

of any magnitude, every ant-hill had become so familiar that they had entirely lost the charm of novelty.

Aboo Sammat, in the most complimentary way, had made me a variety of presents: by special messengers he had conveyed to me animal and vegetable curiosities of many sorts. He once sent me the munificent offering of a flock of five-and-twenty sheep; and at my own desire, but at his cost, he furnished me with a young interpreter to teach me the dialect of the Niam-niam. In the middle of November, on his return from the Meshera, he would take our Seriba on his way, and I resolved to join him.

The people at Ghattas's quarters endeavoured, but to no purpose, to dissuade me; they represented in very melancholy colours the misery to which I should inevitably be exposed in the desert life of Aboo Sammat's district, which was every now and then threatened with starvation. There would be no lack of monuments of antiquity ("antigaht," as they called them), or of hunting, or of wild beasts, but I must be prepared for perpetual hunger. Against all this, however true it might be, I consoled myself with the reflection that Aboo Sammat would certainly manage to keep me in food, and the difference of one more or less in number could not be very serious.

Another important reason which weighed with me was the saving of expense in the way of travelling. The mere cost of bearers for a journey through the Niam-niam lands would be some thousand dollars, which, according to contract, would go into the pocket of Ghattas: this would entirely be avoided if Aboo Sammat fulfilled his promise, and there was nothing to induce me to suppose that he was otherwise than a man of his word.

Nothing now seemed longer to detain me in the Dyoor or Bongo countries: accordingly, resolved to make a start, I packed up my goods without delay, and made the Governor acquainted with my intention. A regular commotion followed

in the Seriba: the clerks and notaries produced the contract which had been signed at Khartoom, and attempted not only to demonstrate that Aboo Sammat had no right to receive me, but that Ghattas had the sole responsibility of my weal and woe, and must answer, at the peril of his head, for any misfortune that might befall me while I was under the tutelage of Aboo Sammat. The distorted character of their logic was manifest as soon as the evidence was shown that Ghattas was under obligations to me and not I to him.

After I had made all my arrangements to store the collections which had accumulated since my last despatch, I prepared to quit my bountiful quarters and to start by way of Koolongo over the desolation of the wilderness towards the south. The baggage which I found it necessary to take, I limited to thirty-six packages. The Nubian servants, three slaves, and the interpreter, composed my own retinue, but Aboo Sammat's entire caravan, counting bearers and soldiers, consisted altogether of about 250 men. I myself joined the main body at Kulongo, where preparations had just been completed for the passage of the Tondy, which was then at high flood.

The regular progress began on the 17th of November. A march of an hour brought us to the low plain of the Tondy, where four Bongo bearers were ready for me with a kind of bedstead, on which I reclined at my ease as they conveyed me upon their shoulders above the many places which were marshy or choked with rushes, till they reached the ferry that Aboo Sammat had arranged. This ferry consisted of a great raft of straw, upon which the packages were laid in separate lots, and to which most of the bearers clung while it was towed across by a number of swimmers who were accustomed to the stream. The Nubians floundered like fish in the strong current, and had some work to do in saving many a "colli," which, in the unsteadiness of the passage, was thrown out of its equilibrium. The river, by its right

bank, was running at the rate of 120 feet a minute and was about 200 feet across. Nearly exhausted as I was by the violence of the stream, when I approached the further side I was grasped hand and foot by a number of the swimmers, who brought me to land as if I had been a drowning man.

Beyond the river the land was less affected by any inundation, and after a few minutes we came to a steep rocky highland which bounded the way to the south. Rising to an elevation of little more than 200 feet, we had a fine open view of the depressed tract of land through which the Tondy meanders. Its windings were marked by reedy banks; the mid-day sun gleamed upon the mirror of various backwaters, and the distance revealed a series of wooded undulations. In a thin dark thread, the caravan wound itself at my feet along the green landscape, as I have endeavoured to depict it in the annexed illustration. The height on which we stood was graced by a beautiful grove, where I observed a fresh characteristic of the region, viz., the alder-like Vatica, a tree of no great size, but which now appeared in detached clumps. In the foreground of the picture are represented some of the most charming types of vegetation in the bushwood; on the left is the large-leaved blue-green *Anona senegalensis;* on the right, the *Grewia mollis,* a shrub with long twigs that supplies an abundance of bast and string wherever it grows. The little tree of the pine genus is the willow-leaved Boscia, which is a constant inhabitant of the Upper Nile district.

It was getting late in the day before we had assembled our whole troop upon the plateau. Very short, consequently, was our march before we halted for the night. The spot selected for the purpose had formerly been a small Seriba belonging to Ghattas; but in consequence of the Bongo who had settled there having all deserted, and of the difficulty of maintaining any intercourse with other Seribas during the rainy season, it had been abandoned. It was a district of utter desolation, far away from any other settlements.

I. THE DEPRESSION OF THE TONDY. *p.* 336.

A brook, which in July and August becomes swollen to a considerable stream, flowed past our quarters for the night, and joined the Tondy at the distance of a few leagues. To this rivulet, which has its source in the Madi country, in lat. 5° 10′ N., the Bongo give the name of the Doggoroo, whilst it is known as the Lehssy in the districts which divide the territories of the Bongo from the Niam-niam. Up the stream we followed its course for two hours, keeping along the edge of a pleasant park-like country, till we arrived at some thickets, which we had to penetrate in order to reach the banks of the stream. Sluggish here was the water's pace; its breadth was about thirty feet, and it was sufficiently shallow to be waded through, scarcely rising above our hips; on our return in the following year the passage involved us in considerable difficulty. Beyond the Doggoroo the ground made a gradual but decided rise, and for more than forty miles the ascent was continuous. It was the first elevation of the ground of any importance which I had yet seen anywhere south of the Gazelle; for here was a broad offshoot of the southern highlands, which, according to the statements of the natives, serve as a watershed for the coalescing streams of the Tondy and the Dyau (Roah).

After we had proceeded in a south-easterly direction till we had accomplished about a third of our journey to Sabby, the Seriba of Mohammed Aboo Sammat, we had at no great distance the territory of the Dinka upon our left. The adjacent clan is called the Goak, and a large number of the Bongo have taken refuge amongst them to escape the aggressions and stern oppression of the Nubians. The Dinka, for their part, impressed the strange intruders with such awe that, since Malzac (the well-known French adventurer, who for several years took up his quarters on the Rohl), no one has repeated the attempt to establish a settlement in their district. It is simply their wealth in cattle that is a temptation to occasional raids, which are studiously accomplished

as far as possible without bloodshed. On the last stage between the Tondy and the Doggoroo we repeatedly came across the traces of elephants; but the trenches which had been designed to catch them had not as yet been a success. Elephants seem to prefer to make their way along the narrow paths which have been already trodden by the foot of man through the high grass, notwithstanding that they are not sufficiently broad to admit a quarter of their huge bodies.

After the rains are over and the steppe-burning accomplished, the landscape reminded me very much of the late autumn-time of our own latitudes. Many trees were entirely destitute of foliage; the ground beneath them being strewn with yellow leaves or covered with pale sere grass as far as the conflagration had spared it. One charming tree, a kind of Humboldtia, was conspicuous amidst the shadowy groves. It has seed-vessels a foot long, the seed itself being as large as a dollar, whilst its magnificent leaf is a beautiful ornament to the wood scenery wherever it abounds. The gay colours of the young shoots, sprouting directly from the root, crimson, purple, brown, or yellow, contribute in a large degree to this effective display. The foliage generally is so light that it was quite easy to penetrate into these woods, which constantly and agreeably relieved the barren aspect of the region.

A considerable number of antelopes from various quarters had been killed by the hour in which we encamped for the night in a forest glade. These antelopes belonged to the Waterbocks (*A. ellipsiprymna*), of which the head is very remarkable, on account of the large excrescences which obtrude from the side of the nostrils, in the same way as in the wild buffalo. It has a fine sweeping pair of horns, which crown its brow. The hair of this species of Waterbock is extremely long and soft, and its skin is a very favourite decoration of the Niam-niam. There is but little difficulty

in getting an aim at this animal, as its white haunches soon betray it amid the gloom of the forest, where it is more frequently found either quite solitary or in very small groups. I very much relished the tender flesh of the kids, although it was somewhat deficient in fat.

The Central African Waterbock.
(*Antilope ellipsiprymna.*)

When morning dawned the only remnant of our supper was a pile of crushed bones; for neither skin nor gristle had been spared by the greedy negroes. The beast of prey disdains what a voracious man will devour; the beast rejects what is tough, and gnaws only about the soft and supple joints, whilst man in his gluttony roasts the very skin, splits the bones, and swallows the marrow. Splintered bones, therefore, here in the lines of traffic, just as they do in the caverns of antiquity, afford a distinctive evidence of the existence of men, whilst bones that have been gnawed only attest the presence of lions, hyænas, jackals, and the like.

Few there are who have not read of the glory of the southern heavens; rare is the traveller in the tropics who has not revelled in the splendid aspect of the great arch above when illumined by the shining of the moon. After a long hot march it may indeed happen that the traveller is far too weary and worn-out to be capable of appreciating the charm of any such beauties; in passive indifference, stretched upon his back, he turns a listless eye unconcerned upwards to the sky, till sleep overpowers him; and thus unconsciously he loses the highest of poetic ecstacies. Soon the heaven bedecks itself with countless numbers of fleecy clouds, which separate as flakes of melting ice, and stand apart: the deep black firmament fills up the intervals, and gives a richer lustre to the stars; then, circled by a rosy halo, rises the gentle moon, and casts her silver beams upon the latest straggler.

Meanwhile, far in the lonely wood, there has arisen, as it were, the tumult of a market; the gossip of the chatterers is interrupted now and then by the authoritative word of command of some superior officer, while many a camp-fire is kindled and illuminates the distant scene. To protect himself against the chilly air of night, each separate bearer takes what pains he can, using what ashes he can get for his covering. Wreaths of smoke hover over the encampment, a sense of burning oppresses the eyes and makes sleep all but impossible, and thus the attention is ever and again arrested by the moving orbs in the heavens above. To the traveller it well might seem as if the curtain of a theatre had been raised, and revealed a picture of the infernal world where hundreds of black devils were roasting at as many flames. Such were my nightly experiences as often as I journeyed with a large number of bearers.

About noon on the third day, after marching about sixteen leagues from Kulongo, we arrived at Duggoo, the chief Seriba of Shereefee, who maintained some small settlements in this remote wilderness. Notwithstanding the almost un-

limited scope with regard to space, he was on the bitterest terms of hostility with Aboo Sammat, his neighbour in the south. A regular mediæval feud had broken out between them, the nominal cause of the quarrel being that one of Shereefee's female slaves had been maltreated, and, having taken refuge with Aboo Sammat, had not been restored; but the interchange of cuffs and blows had been the actual ground of the discord. When two months previously Aboo Sammat was despatching his ivory-produce of the year, consisting of about 300 packages, to the Meshera, it was seized by the negroes as it was being conveyed across Shereefee's district. These negroes attacked the defenceless bearers and massacred several of them; others they wounded with arrows and lances, till the whole caravan was overpowered, and every one throwing down his valuable burden made a precipitate flight. The Khartoom soldiers belonging to Aboo Sammat looked quietly on throughout the fray, for no attachment to their master would have induced them to fire a shot against any of their brethren.

Aboo Sammat, with all his property, was now in the desert, 150 miles away from the boats. To enter into action against Shereefee he hastened to the west, and induced a number of the controllers of Seribas to repair to the scene of violence, and to insist upon judgment being passed at Khartoom. But to accomplish this purpose he had to travel hundreds of miles in a few weeks, during the rains, and before his task was completed the proper time for shipment had elapsed, the high waters had abated, and all his goods had to remain at the Meshera to await another season, exposed all along to the too probable attacks of the hostile Dinka. Aboo Sammat, so far from taking the law into his own hands, had proceeded in the most legitimate way to demand compensation; but Shereefee, not satisfied with the wrong he had already perpetrated, spurred on his negroes to make repeated incursions upon his rival's territory. Sometimes he endeavoured to

entice Aboo Sammat's Bongo people to desert, and sometimes sent his own to commit all manner of outrage and depredation. Many of the poor natives, the shuttlecocks of the fray, lost their lives in the contention; and I enriched my collection of skulls by some splendid specimens which I picked up on my way. "This was the spot," said Aboo to me, "where the thieves made their attack. You have seen for yourself, and should speak up for me."

Approaching the neighbourhood of the hostile Seriba we made a halt in the open country, about half a league away. To put a good face on the matter, and to make an impression upon Shereefee's people, everybody put on their best clothes, and Aboo Sammat's soldiers came out in all the gay colours of the fresh chintz which had just been acquired from the stores of the Meshera. The Turkish cut of these garments contributed in no small degree to the self-confidence of the men, and the Kenoosian could fairly pride himself upon having a troop who, not merely in externals, but in general discipline, were far superior to the disorderly bands which, in dirty rags, were quartered at the other Seribas. Every precaution was taken to guard against a sudden attack, and patrols were sent out to protect the flanks of our extended line. Ambushed in the thickets some armed Bongo were actually seen, but these outlying sentinels as soon as they observed there was a white man in the caravan, having heard of my presence in the country, abstained from any exhibition of hostility. Thus unmolested we drew close up to the Seriba, and Mohammed's party bivouacked out in the open country. Meanwhile I was received in the most friendly manner by Shereefee's brother, who was here in charge, and there was no disposition to act towards a Frank in any way that might involve difficulty at Khartoom. But I could not help thinking how narrowly all my baggage might be escaping attack, and what a hopeless attempt it might be to recover it.

The whole district, as I have mentioned, had been gradually rising in terraces all the way from the Tondy; and only just before we reached the Seriba, which was named Duggoo, after the superintendent of the place, had we marched continuously up-hill for half a league; no flowing water had hitherto been observed. On the south-west and south-east were visible the highlands in the distance, whilst in front of them were elevations of from 100 to 200 feet above the level of the adjacent vale. One of these elevations was very close to Duggoo in the north-east, whence from a bamboo jungle there streamed in the rainy season a brook which fell into the Dyau. The recesses and caverns in the red iron-stone reminded me of the great grotto at Kulongo, with its swarms of fluttering bats (*Phyllorhinus caffra*) and vast accumulation of guano.

The wide stretch of country between the Tondy and the Dyoor, extending some seventy miles, had but three years since been a populous district with many huts; now, however, it had only a few scattered habitations of the Bongo, which were grouped in the vicinity of either Aboo Sammat's or Shereefee's Seribas. Since the Bongo have been expelled by the Dinka, nothing but elephants and antelopes have found their pasture in those wild plains, which have once been cultivated. Occasionally the ruins of the burnt villages were still extant, rising above the rank grass. Nothing survived as direct evidence of the habitation of men; what scanty remnants of dwelling-places the first conflagration of the steppes had spared, either the ants or natural decay had soon destroyed. The only remaining vestiges of the occupation of the land are due to the richness of vegetation, and this has left its characteristic traces. I could specify some fifty or sixty plants which correspond so accurately with the weeds of other cultivated countries that they are significant tokens of a former presence of men. The preponderating Indian origin of all these plants is very observable, and a

better acquaintance with the geographical facts connected with them would probably be as trustworthy an indication of the various migrations of an uncivilized people who have no history as either their dialect or their physical development.

Five leagues away from Duggoo we arrived at Dogguddoo, the second Seriba of Shereefee, where he was then resident. Many a slough and many a marsh had we to traverse on our progress, the result of the rain which had been falling for months. Midway we paused for a rest beside the relics of a great Bongo village, where stood the ruins of a large fence of the same description as is seen around the present Seribas. In the very centre of the village had stood, as is commonly found, an exceedingly fine fig-tree (*F. lutea*), and there were besides, a large number of tombs constructed of blocks of stone and ornamented with strangely-carved posts; at some little distance was a number of handmills that had been left behind, destined for some years to come to be a memorial of the past. The spot, named after the previous governor, was called Pogao. Shortly afterwards we arrived at a charming little brook, known as the Mattyoo, which, under the shadow of a pleasant copse-wood, went babbling over its red rocky bed, making little cascades and rapids as it streamed along.

In consequence of the repeated burnings of the steppes, well-nigh all vegetation was now blighted and impoverished: in particular the higher districts presented an appearance of wretched desolation. Repeatedly, in the winter landscape of the tropics, there are seen trees standing in full foliage in the very midst of their dismantled neighbours; and the loss of leaf would seem to be hardly so much an unconditional consequence of the time of year as a collateral effect of locality or condition of the soil.

After having for months together explored every thicket, and day after day penetrated into the high grass on the river-banks, I could not suppress my astonishmant at the absence of every description of snakes. The Khartoomers

suggest an explanation of this circumstance which I am not disinclined to accept; they conjecture that in this stony region there is a deficiency of that rich black soil which splits like a glacier in the dry season, and makes riding in the North-Eastern Soudan a very dangerous proceeding; and, consequently, that there is neither a way for snakes to escape from the fires of the blazing steppes, nor any of those lurking-places which are indispensable for their resort.

Incalculable in its effect upon the vegetation of Central Africa must be the influence of the annual steppe-burning, which is favoured by the dryness of the seasons. The ordinary soil becomes replaced by charcoal and ashes, which the rain, when it returns, as well as the wind, sweeps right away into the valleys. The rock is, for the most part, a very friable and weather-worn ironstone, and upon this alone has everything that grows to make good its footing. The distinction, therefore, as might be imagined, is very marked between vegetation under such conditions, and vegetation as it displays itself by the banks of rivers, where the abundant grass resists the progress of the fire, and where, moreover, a rich mould is formed by the decay of withered leaves. But even more than the impregnation of the soil with alkalies, does the violence of flames act upon the configuration of plants in general. Trees with immense stems, taking fire at the parts where they are lifeless through age, will die entirely; and, where the grass is exceptionally heavy, the fresh after-growth will perish at the roots, or in other places will be either crippled or stunted. Hence arises the want of those richly-foliaged and erect-stemmed specimens which are the pride of our own forests; hence the scarcity of trees, which are either old or well developed; and hence, too, the abnormal irregularity of form which is witnessed at the base of so many a stem and at the projection of so many a shoot.

Flowing without intermission all through the year, close

by Dugguddoo, there is a brook which the Bongo have named the Tomburoo. Its water hurries on at the rate of 170 feet per minute, its depth hardly ever exceeds three feet, while its breadth varies from 20 feet to 50. Its banks, about four feet high, were bounded by land subject to inundations corresponding to the measurement of the stream. At a league's distance to the east, the general elevation of the soil began afresh. The environs of the Seriba of Shereefee were only scantily cultivated, as the Nubians and the Bongo lived by preference on the produce of the plundering forages which they were accustomed to make amongst the adjacent Dinka tribes, the Ayell and the Faryahl, towards the north.

Exposing itself far and wide, there was the naked rock, the barrenness of which was only interrupted at intervals by a scanty covering of human bones! Carried off in groups, the captured slaves here succumbed to the overwrought exertions of their march. At times they died literally of starvation, as often there was no corn to be had in the barren land. The overland dealers in slaves make their purchases here at the most advantageous prices. In these eastern Seribas, as the result of the perpetual raids upon the Dinka, there is always a superabundance of the living black merchandise on hand, but very rarely is there an adequate supply of food for their maintenance. The traders proceed from Seriba to Seriba with their gangs, which they maintain on whatever provisions they can get on the way. Where destitution is an ordinary phase of things, it is self-evident that the traffickers, having no resources to support a lengthened journey, must, day after day, suffer considerable loss, and it is no unwonted thing for their gangs to melt away by a dozen at a time. Burnt bones of men and charred palisades of huts are too true an evidence of the halting-places of Mohammedanism, and, day by day, more and more was my imagination shocked by these horrid spectacles. In

the very Seriba there was even awaiting me afresh the miserable sight, to which no force of habit could accustom me, of a number of helpless children, perfect little pictures of distress and wretchedness, either orphans or deserted by their mothers, and who dragged on a pitiable existence, half-starved, burnt by falling into the fire in their sleep, or covered with loathsome sores.

Turning short off, almost at a right angle to our previous direction, our way beyond Duggoroo, after seven leagues, over a country well-wooded and rich in game, led us to the borders of Aboo Sammat's territory. Once again the land began to rise, and appeared to be all but barren in water-courses of any kind. As we went along I picked up, in a state of perfect preservation, several of the bleached skulls of some of Aboo Sammat's bearers, who, wounded in the murderous attack by Shereefee's people, had never been able to regain their homes. In a bag, which one of my attendants constantly carried, I had a collection made of a number of the great land-snails which, after the termination of the rains, abounded in this region. The two kinds which appeared most common were *Limnicolaria nilotica* and *L. flammea;* of these, the former is rather more than four inches in length, the latter rather more than three. They invade the bushes and shrubs, and have a great partiality for the tender leaves of the numerous varieties of wild vine. They serve as food for a number of birds, the *Centropus monachus*, the cuckoo of the climate, in particular having a keen relish for them. Their shells are as thin as paper, a circumstance which, like the brittleness in the egg-shells of hens, testifies to the deficiency of chalk in the soil. I was in need of soap, and the chief object which I had in taking the trouble to collect these shells was to obtain what cretaceous matter I could, to enable me to make a supply, no other method of getting it occurring to my mind. At night we rested at a poor Seriba called Matwoly, where we were

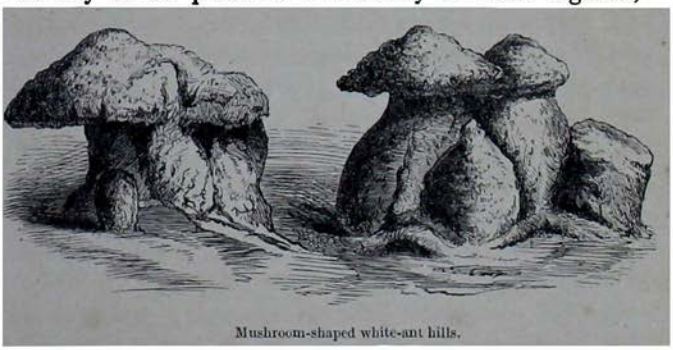
received in some dilapidated huts, as the place, together with all its Bongo adjuncts, for greater security against the attacks of Shereefee, was about to be abandoned.

The wearisome monotony of the woods, now generally stripped of their foliage, was enlivened by the fresh green of the Combretum, which here long anticipates every other tree in putting forth its tender buds. Gaily it stands apart from the uniform grey and brown of the surrounding forest, thrown into yet higher relief by the yellow of the mass of withered grass below, and showing itself brightly from the half-shaded gloom of the wood beyond.

Although I had now advanced an entire degree nearer to the Equator, being now in a latitude of 6° 20′ N., I still found that the landscape around had charms to offer which were not inferior to the winter beauties of the distant north. In the early morning I delighted to see the rimy dew that had fallen on the sprouting grass, and which frequently remained as late as nine o'clock; over the feathery Pennisetum and the Agrostideæ it fell like a white veil, and the bright drops sparkled like diamonds in the sunshine. The slender gossamer, moreover, which stretched itself over the deeps and shallows of the soil, and even over the footprints in the ground, appeared to operate as a conductor of the dew, which congealed till it was like a film of ice which crackles beneath the tread of a traveller in the autumn.

Distant four and a half leagues to the south lay Aboo Sammat's head Seriba, known as Sabby, the name of its Bongo chief. Half-way upon our march we crossed a considerable stream, which was called the Koddy. As we forded its breadth of twenty feet, we found the water rising above our hips. Here again the candelabra-euphorbia seemed to be abundant, after having never been seen since I left the eastern bank of the river Dyoor. An essential feature of the district between the Dyoor and the Rohl is contributed by the small mushroom-shaped ant-hills which, found as they

are in many a part of Tropical Africa, here cover the stony urface with their peculiar shapes. Formed exactly like the common mushroom, the separate erections of the *Termes mordax* are grouped in little colonies. The main difference between the tenements of these ants and those which construct conical domes as tall as a man, consists in this, that they have a definite altitude, which rarely exceeds thirty inches, and immediately that there is no further space they raise new turrets and form fresh colonies. The materials, too, of which this species of Termes constructs its edifice is neither grey nor of a ferruginous red, but is simply the alluvial clay of the place: it is so closely cemented together,



Mushroom-shaped white-ant hills.

that it defies the most violent kicking to displace it, and is hardly less solid than brickwork. The natives are very glad to employ it for the construction of their huts; they break it into fragments with their clubs, and moisten it till its substance yields. By the Bongo it is called Kiddillikoo.

The red ferruginous clay is the only material out of which the great ants (*Termes bellicosus*) construct their buildings. These are seldom found elsewhere than in a wood, where the pointed shapes are never seen. The neighbourhood of Sabby especially abounded in these monuments of animal labour, and not a few of them were fifteen feet in height. In altitude greater than in breadth, they reared themselves like a

large cupola surrounded by countless pillars and projecting towers. At the first commencement of the building it embraces only some isolated domes, which gradually are combined into one single cluster, whilst the ramifications of the interior have entirely to be reconstructed. When we reflect that the dimensions of the bodies of these toiling ants (the female neuters) are not one thousandth part so great as the structure that they upheave, we cannot refrain from comparing their edifices with the most extensive cities which human hands have reared. During my previous journey, I had found several opportunities of investigating the secret habits of these wondrous creatures. The life of the traveller in Africa is one continual conflict against their aggressions. Once at the missionary station in Gallabat, for seven days did the people work away with crowbars to remove one of these erections, which had been accumulated in the middle of the courtyard, and which was not only an impediment in the way, but was a nuisance to the adjacent huts. At length they penetrated to the royal chamber, and dragged forth the queen to the daylight, from which she had carefully excluded her subjects.

All the ant-hills of which I was able to make a survey were constructed upon the double-chamber system, the maze of cells being divided apparently into two separate storeys. Adequately to describe the marvellous interior of one of these haunts of the community would require a volume of itself. No labyrinth of coral could be more intricate; its walls are curiously cemented together, its chambers are most carefully arranged and most amply stored with vegetable produce, and there are magazines which teem with cakes and loaves. A regular series of bridges conducts from place to place, and many a crossway traverses the pile. To detail the wonders of these erections would tax the patience of the reader, and the study of a life-time would not exhaust the marvellous perfection of the organization which they present.

As might be conjectured, there is no want amongst these woods of ant-hills such as these, which have ceased to be occupied, and which consequently have been adopted as lurking-places by various kinds of animals that shun the light and lead a troglodite existence. Here skulks the aard-vark or earth-pig (*Orycteropus*); here gropes the African armadillo (*Manis*); hither resort wild boars of many a breed; here may be tracked the porcupines, the honey-weasel, or ratel; here go the zebra-ichneumons and the rank civet-cats; whilst here, perchance, may be found what in this land is rare, an occasional hyæna.

Thus, after seven days' journeying over a country all but uninhabited, on the 23rd of November I found myself at the head Seriba of my friend and protector, who received me with true Oriental hospitality. First of all, he had newly-erected for my use three pleasant huts, enclosed in their own fence; his thoughtfulness had gone so far that he had provided me with several chairs and tables; he had sent to a Seriba, eight days' journey distant, to obtain some cows, that I might enjoy new milk every day; and, in short, he had taken the utmost pains to insure me the best and amplest provisions that the locality could supply. My attendants, too, who, together with their slaves, made up a party of thirteen, were entertained as freely as myself: everything contributed to keep them in good mood, and they were delighted jointly and severally to throw in their lot with mine.

The natives, when they saw not only their own superior, but the governors of other Seribas, treat me with such consideration, providing me with a palanquin for every brook, came to the conclusion that I was a magnate, and said to each other, "This white man is a lord over all the Turks"—Turks being the name by which the Nubians here wish to be known, although before a genuine Osmanli they would not have ventured to take such a title. As Aboo Sammat used jocosely to remark, they were accustomed at home to

carry mud, but here they carried a gun instead. It was a matter of congratulation to myself that the people already had arrived at some apprehension of the superiority of an European. It set me at my ease to observe that I had nothing to fear as to being mistaken by the natives for one of the same stock as the Nubian menials. Equally advantageous to me was it that the same impression prevailed amongst the Niam-niam and the distant Monbuttoo, to whose territories I was approaching, and accordingly I entered upon my wanderings under what must be considered favourable auspices.

Situated in a depression between undulating hills which stretch from south-west to north-east, the settlement of Aboo Sammat was surrounded by numerous Bongo villages and fields. Here he centred an authority over his Bongo and Mittoo territories which stretched away for no less than sixty miles. The residence of Aboo himself was about a league away, where he kept his harem in retirement, his elder brother having the charge of the principal Seriba. After I had settled myself as conveniently as I could, I began afresh my accustomed rambles, so that, in the same way as I had done in Ghatta's Seriba, I might familiarise myself with all the environs.

At this period, when vegetation was at a stand-still, the flora presented little novelty, and whatever I found corresponded very much with what I had already seen in the district between the Tondy and the Dyoor. The woody places around Sabby were generally somewhat thicker; there was neither the same expanse of low steppe-country, nor the same frequent interruption of woods by grassy plains. Corresponding to this density of growth of the forests there was a greater variety in the fauna.

Meanwhile, amidst my investigations, I did not lose sight of my projected journey to the Niam-niam, and continually made what preparation I could. I criticised very diligently the

muscles and measurements of the people, and very materially enlarged my vocabulary. Although I was only half-way towards the country of the Niam-niam, I found myself brought into connection with a considerably large number of them, and subsequently I was enabled in a degree to master their dialect. The report of the feud between Mohammed Aboo Sammat and Shereefee had extended to Mohammed's outlying Seriba in the Niam-niam country, and had grown into a rumour that all his people had been exterminated by Shereefee's agents. For the purpose of obtaining more reliable information the manager of the Seriba, ninety miles away, had sent ten young men to Sabby, and their strange appearance very much surprised me. Everything which I had hitherto seen of the people served to strengthen my conviction that they were marked off from the other population of Africa by a distinct nationality of their own. Even the Bongo seemed here to arouse my interest more than at Ghattas's Seriba, where, on account of their longer period of subjection, they had gradually lost very many habits and peculiarities of their race. I spent accordingly a good deal of my leisure in making sketches of their dwellings and their furniture, and in my numerous excursions round the villages, I persisted in investigating everything, however immaterial it might seem, as though I were examining the vestiges of the prehistoric life of a palisaded colony.

The three slaves who accompanied me were now indispensable as interpreters. Apart from them I could have prevailed very little in overcoming the shyness and mistrust towards strangers which the natives continually exhibited: an exterior survey did not satisfy me, and I persevered till I gained admittance to the inside of several of the huts, so that I could institute a regular domestic investigation. Every corner was explored, and by this means many a strange implement was brought to light, and many an unexpected discovery revealed.

The granaries of the Bongo were now quite full, as the harvest was just over: all was consequently mirth and riot in the district, and many a night's rest did I find disturbed by the noisy orgies which re-echoed from the shadowy woods. At full blast for hours together were the long wooden trumpets, the loud signal-horns, the huge trombones, and those immense drums for the construction of which the strongest timber has been selected from the forests. The powers of shrieking were put forth to the uttermost. Like the rolling of the breakers of an angry sea, the noise rose and fell: alternate screechings and howlings reached my ears, and hundreds of men and women seemed to be trying which could scream the loudest. Incapable of closing an eye for sleep while such infernal outcry was around, I went several times to inspect the frantic scene of merriment. Nights when the moon was bright were those most frequently selected for the boisterous revelry; the excuse alleged being that the mosquitoes would not let them rest, and therefore it was necessary to dance; but in truth, there was no nuisance of flies here worth consideration: I was not annoyed to anything like the same extent as upon my backward journey on the White Nile.

The following may be submitted as something like an ordinary programme of these *soirées musicales.* Slowly and mournfully some decrepit old man, or toothless old woman, begins with broken voice to babble out a doleful recitative; ere long first one and then another will put in an appearance from the surrounding huts, and point with the forefinger at the original performer, as if to say that this is all his fault, when suddenly, all together, they burst forth in universal chorus, taking up the measure, which they work into a wondrous fugue. At a given signal the voices rise in a piercing shriek, and then ensues a series of incredible contortions; they jump, they dance, and roll themselves about as though they had bodies of indian-rubber; they swing them-

selves as if they were propelled with the regularity of machines; it would almost seem as if their energy were inexhaustible, and as if they would blow their trumpets till their lungs gave way, and hammer at their drums till their fists were paralyzed. All at once everything is hushed; simultaneously they make a pause; but it is only to fetch their breath and recover their strength, and once more the tumult breaks out intense as ever. The license of their revelry is of so gross a character that the representation of one of my interpreters must needs be suppressed. It made a common market-woman droop her eyes and called up a blush even to a poor sapper's cheek. Many of the people had iron rings about their ankles with balls attached, and these they rattled with such violence that their feet were bathed with blood.

Go where I might, I found nothing but lamentation over the impoverishment and desolation of the land, yet those who complained were themselves responsible for its comfortless aspect. Whilst, through the migration of the people, the country towards the north during the last three years had been changed into a wilderness, the Bongo, who clung to their homes and remained on their settlements, had not only lost their former wealth in sheep, goats, and poultry, but had even been too much driven to extremities to continue their cultivation of corn, and were sufferers from what was little short of famine. The Bongo asserted that in the first year that the Khartoomers committed their depredations amongst them, they were so terrified lest all their sheep, and goats, and poultry should be carried off, that, without delay, they had them all killed, cooked, and eaten. Eye-witnesses were not wanting who told me what had been the astonishing quantities of poultry that once had teemed in every village; but when there ceased to be any security for any one to retain what he had, of course there ceased to be any interest in making a store. If the harvest were prolific so that the

granaries were full, the settlers would revel in indulgence as long as their resources held out; but for the greater portion of the year they had to depend upon the produce of the woods and upon the proceeds of the chase, which had often no better game to yield than cats, lizards, and field-rats. Not that there was any actual fear of starvation, because the supply of edible tubers and of wild fruits from the extensive woods was inexhaustible and not ill-adapted to a negro's digestion, and because there was an abundance of the seed of wild grasses to be collected, which replaced the scarcity of corn.

In productiveness the land around Sabby was not inferior to the environs of Ghattas's Seriba. The ears of sorghum here, as frequently as there, reached to a weight of six pounds; but at the same time the level tracts under cultivation were far less extensive, and in all the rocky places could only produce a smaller yield. The natives, however, never ventured to bring any of their grain to market, as I had been accustomed to see them: whatever anyone possessed, he cautiously kept out of the sight of the stranger. From all regular and systematic agriculture, the natives were as a rule debarred, because in the course of the year nearly every able-bodied man was compelled to go and do duty as a bearer, and consequently for months together was a stranger to his homestead, whilst he either plodded backwards and forwards to the Meshera, or was engaged upon the Niam-niam expeditions. Of copper, beads, and knick-knacks of every sort they managed to increase their store, but in agriculture they decidedly were retrograding. It was with them precisely as with their oppressors from afar: just as in Nubia, there was a destiny of evil being fulfilled upon the land, so here was the spectacle of a region degenerating from prosperity into neglect and woe.

Repeatedly in the evening hours I watched the ghost-like fluttering of a long feathered goat-sucker of the species

Cosmetornis Spekii Sclater, observed by Speke * in Uganda, and which was to be recognized by the astonishing elongation of the seventh and eighth wing-quills, the latter of which reaches over twenty inches in length. There was a second species of this genus, of which the male had the same kind of prolonged shaft-feathers expanded at the end and fluttering in the air like a peacock's tail. This was the *Macrodypterix longipennis*, a remarkable bird which the Arabs call the "father of four wings," because, as it chases the mice, it looks as though it had a couple of satellites in attendance. Both these make their earliest appearance about a quarter of an hour after sunset and as the twilight passes rapidly into thorough night; I had, therefore, only scanty opportunities of sending what were at best only stray shots to bring them down. For the purpose of catching insects they generally wheeled in circles at no great distance from the ground, but as the range of their flight was very circumscribed and its rapidity extremely great, it was somewhat difficult to get a good aim. However, as the practice was repeated daily, I succeeded in securing a considerable number of Speke's interesting *Cosmetornis*. I should mention that while I had been in Ghattas's Seriba, sport of this kind had very frequently been an evening recreation. The antipathy of this aëronaut of the dusky evening to the clear light of day, seemed very remarkable: it kept itself to the seclusion of the low bushwoods, and when roused up would disappear again at the first ray of light; often it would settle itself on the ground in a pile of leaves to which its own hue corresponded, and it might then almost be trodden upon before it could be stirred into flight.

During the incessant excursions which I kept making round Sabby I was able to discriminate not less than twelve distinct species of antelopes, of which I was successful

* Vide Speke's Journal, p. 462.

in shooting several. Frequently met with here is the antelope (*A. oreas*) which is known as the Elend. During the rainy months it gathers in little groups of about half-a-dozen in the drier districts on the heights, but through the winter it is, like all its kindred, confined to the levels by the river-sides. Upon the steppes through which flow the brooklets in the proximity of Sabby the leucotis antelope is the most common of all game, and many is the herd I saw which might be reckoned at a hundred heads. Perhaps nowhere in the whole of North-east Africa would any one have the chance of seeing such numerous herds of antelopes collected together as travellers in the south are accustomed to depict. Assisted by a whole clan of Kaffirs, the Boers on the 24th of August, 1860, had a *battue* in honour of the Duke of Edinburgh, of which the result was that between 20,000 and 30,000 antelopes are said to have been enclosed. Of the more circumscribed district of the Nile the parts that are most prolific in game are on the north-west declivity of the Abyssinian highlands, on the Tacazze or Seteet, in the province of Taka: there it is not an unknown circumstance for herds to be found which exceed a total of 400 head, but they do not correspond in the remotest degree with those which are depicted in the published engravings of the South African hunt. Still poorer in numbers of individuals are the antelopes in Central Africa proper, where the uniform diffusion of men encloses smaller wastes than those which can alone provide large lairs for game.

Amongst the numerous smaller beasts of prey to which the regions that I visited gave harbourage, the zebra-ichneumon was to me one of the most interesting. I was very successful in securing living specimens of this widely-scattered species, and could not suppress my astonishment at the facility with which they were domesticated in my dwelling; if ever they get established in a house there is no getting rid of them. It is a saucy creature, and has neither fear to show nor submission to yield to the authority of man. It resembles

the wild cat of the steppes in the ease with which it can be accustomed to a home life. I found it exceedingly troublesome on account of the pertinacious curiosity with which it peeped into all my cases and boxes, upset my pots, broke my bottles, with no apparent object but to investigate the contents. To accomplish its aim it made incessant use of its long, taper, snuffling snout as a lever. But the most vexatious art of which the animal was master was the skill it had in scenting out the spots where my hens were accustomed to lay their eggs, and of which it learnt the flavour before I had an opportunity of removing them to a place of safety. It is moreover a tricky little animal; by whisking and wagging its tail it assumes the appearance of fawning and wheedling, but as soon as anyone touches it, he gets a good bite on his finger. When hunted out and followed by dogs, it throws itself down on its back, kicks its legs about, and grins and gnashes with its teeth. To keep clear of being bitten the best way is to pounce upon it by its tail and to let it hang dangling in the air.

One morning there arrived at the Seriba from the far distant boundaries of the Bongo several wild-looking men, armed with bows and arrows. In order to satisfy myself of the effectiveness of their weapons, I set up a mark at a short distance, consisting of an earthen vessel, in front of which I placed a good thick pad of straw, and over all I threw a stout serge coat. Defying all the coverings, the arrow penetrated the coat, made its way through the straw and knocked a hole in the earthenware, which was nearly half-an-inch thick.

A plant there is here which is not very likely to be forgotten by anyone who has made many excursions into the woods: I mean the *Mucuna urens*. It is a sort of bean, of which the pods are enclosed in a thick rind and the leaves are covered with pungent bristles. These bristles are as brittle as fibres of glass and, broken off by the wind, are dispersed in

all directions over the foliage in the forests. No one who explores the thickets can escape being punished by these tiny prickles. The natives, who are naked, go amongst them with the extremest caution. The stinging sensation they cause lasts about ten minutes, but it may be alleviated by washing.

There is a kind of Christ's Thorn (*Zizyphus Baclei*) which every December yields an abundance of fruit, consisting of dry mealy berries, which have a very bitter taste. The colour of these is not unlike a chestnut; they are quite unfit for eating, but the Bongo prepare a powder from them which they throw upon the surface of their waters, and it has the effect of stupefying the fish.

In the parched steppe I repeatedly found a huge chafer belonging to the family of the Elateridæ, but unfortunately the specimens which I secured, together with my other collection of insect curiosities, were all destroyed by fire; and I have now no other reminiscences of them beyond the notes I took that they were of a bright brown colour and were but little short of two inches and a half in length.

Of the few larger shrubs which blow in the winter, an Echinops, with splendid purple blossoms as large as one's hand, left a deep impression on my recollection. They start out of the grass in situations where the woods are not over-dense, and rise to the height of a man. For the sake of the security of what has been styled a "protective resemblance," the mantis takes up its quarters amidst its boughs. Just as the leaf-frog secretes itself on the young and light green foliage, or the white ptarmigan resorts to the snowy downs of the frozen north, so does the mantis here take up its abode on the tree as purple as itself, and there endeavour to find a world in which it may conceal its singular shape. This part of Africa seemed to produce many species of this remarkable genus. Whenever I saw them I derived fresh confirmation for my belief that they try to adapt their places of resort to the specific colours of their bodies: the result of this is, that

they often startle the plant-collector as if they were ghosts, and their strange shape is indeed somewhat suggestive of a harpy. At first sight the heads of the Echinops, on which they settle, look like malformations of the shrub itself, for the insect uncoils its arms, and like a suppliant lifts them to the sky. Every variety in colour seems to belong to the mantis; I have seen them red, yellow, green, and brown; the most remarkable of all was one of the colour of grass, which I found upon the peak of my hut in the Meshera, and which was of the surprising length of ten inches.

Around Sabby the general security was so complete that, quite at my ease and entirely unarmed, I might have ranged the woods if there had been a certain immunity from being attacked by lions; and against this I was compelled to be on my guard as I penetrated the depths of the wilderness to secure the novelties of vegetation, which could not fail to excite my curiosity. Although my vocation constrained me day after day to explore the recesses of the woods more thoroughly, and to make my way through places hitherto inaccessible, yet I never met with any untoward accident. At home I am quite aware that there are some who entertain the idea that every traveller in Central Africa is engaged in perpetual lion-fights, whilst, on the other hand, there are some who make the insinuating inquiry as to whether lions are ever really seen. In a degree both are right—both are in the avenue of truth. Lions are, in fact, universal, and *may* be met with anywhere; but their numbers are not absolutely large, but only proportioned to the princely rank they hold in the scale of animal creation. Their appearance is always a proof of the proximity of the larger kinds of game. Corresponding to the line in history, which tells that forty generations of Mamelooks tyrannized over the people of Egypt, might be registered the line in the records of the animal kingdom, which might run that forty lions found subsistence in the land.

It is not to be presumed that every hunting excursion in Africa is associated with adventure. Such is far from the fact, and it would be utterly wearisome for me to recount every frivolous incident of my ordinary hunt in quest of game for the table. Even in Africa a chase may be as insipid as coursing a hare in the environs of Paris. Shooting and hitting are two different things, as are also hitting and killing on the spot. So great is found to be the nervous resistance of the larger and stronger kinds of game in Africa that the sportsman must be prepared to lose at least 70 per cent. of all that he is able to wound; this will arise not merely from his being destitute of dogs to follow the scent, but from his continually finding himself baffled in pursuit by the world of grass and of marshes, through which he is obliged to make his way. When on the march, another obstacle to securing what is shot often arises from the fear of being left behind by the caravan, and the possibility of losing one's way necessitates a despatch which is unfavourable to success.

One afternoon the chase after a considerable troop of hartebeests led me deep into the wood. The cunning animals watched my movements very anxiously; by stopping repeatedly they enticed me continually further on into the gloom, and still eluded the chance of giving me a shot. Already had I penetrated so far into the forest that the rays of the sun were totally lost, and everything was wrapped in the obscurity of twilight; I was about to make my way over a depression in the ground, to get nearer to an elevation from which the antelopes were calmly surveying me, when I suddenly stumbled over some huge shapeless object, which seemed to me to be moving. Owing to the obscurity of the place I could not distinguish anything, but I found there was an ant-hill close by, of which I endeavoured to make some use; under the protection of this I made an attempt to get a few steps nearer to the enigmatical creature that lay before me; from behind the mound I cautiously made

an investigation, and just at that instant the animal made a lurch, and revealed to me the snout of a huge wild boar, which seemed to cover the whole face like a mask, while a great pair of tusks projected from the bushy bristles of the enormous jaws; the stolid gaze of the brute made it clear that it was not conscious of my being near, but it seemed ready to take a spring upon the first intruder that should disturb it; I approached within the shortest possible distance, and then took aim, and lodged my bullet in the body of the beast. The spectacle that ensued was very singular. The unwieldy creature, contracted like an impaled fly, turned over on to its side, and then, with another contortion, on to its back, where it writhed about and jerked its legs in every direction. Whilst I was patiently abiding my time till the beast should expire, I was taken by surprise as I observed that the hartebeests were within pistol-shot of where I stood, as if they had been spell-bound by the incident which had interposed to rescue them from their pursuer. I was ready anew to take my aim at them. I had, however, only a single-barrelled gun, and no one in attendance to hand me a second. I was just on the point of loading, when, by one of those unlucky chances that will occur, I discovered that in my precipitation I had used all my bullets, and should only waste my labour in following up the pursuit. The wild boar, however, was mine, and I had it brought to my quarters the same evening. I went to bed without partaking of a supper from it, for whenever there is anything to do with the detestable flesh of a wart-hog, I am a regular Mohammedan. Accordingly, I had the greatest satisfaction in handing it over to the hungry negroes.

An incident still more peculiar had occurred to me on a previous occasion when I had gone out to hunt, attended by one of my Nubians, who rode a donkey, of which the supposed office was to carry home whatever might be the produce of my sport. I left my servant and the donkey carefully out

of sight in a spot where two rifts in the soil represented what, during the rains, was the course of two connected brooks. Proceeding to the tall grass, I was not long in sighting a small bush-antelope. I took a shot, and could entertain no doubt but that the animal was struck. I saw it scamper across the grass, and was every moment expecting to see it fall, when I heard a sudden bleat of anguish, and it was gone. Forcing my way through the rank grass, I made the closest scrutiny all around the place where, but a few minutes since, I had seen the wounded antelope, but my search was all in vain. I was encumbered in my movements by having to carry a couple of guns; but, knowing that the area of the ground was bounded by the two rifts that enclosed it, I felt certain that my search would not be without success. At length I discovered the antelope almost at my feet, but it was fixed immovably; it was fastened to the ground by what seemed to me at first the filthy skirt of one of the negroes. Looking more closely, however, I soon saw that the creature had been seized by an immense serpent, that had wound itself three times round its body, leaving its head projecting and drawn down so as well nigh to touch the tail. I retreated far enough to take an effectual aim, and fired. The huge python immediately reared itself bolt upright, and made a dash in my direction, but it was able only to erect its head; the hinder parts lay trailing on the ground, because the vertebral connection was destroyed. Seeing the state of things, I loaded and fired repeatedly, taking my aim almost at random, for the evolutions of a snake are as difficult to follow as the flight of the goat-sucker. I had on other occasions proved that a snake may be killed by one ordinary load of shot, if this at once breaks the vertebral column. I now completed my capture; the return to my quarters was made in triumph; the double booty formed a double burden, the snake on one side of the donkey and the antelope on the other, balancing each other admirably.

CHAPTER IX.

Tour through the Mittoo country. Early morning in the wilderness. Soldier carried away by a lion. Dokkuttoo. Fishing in the Roah. Feeding a slave caravan. Ngahma. Dimindoh, the hunter's Seriba. Wounds from the grass. Dangadduloo. Entertainment in the Seribas. The river Rohl. Reception at Awoory. Footsore. Trial of patience. People of the district. Poncet's Seriba Mvolo. Mercantile prospects for the Egyptian Government. Fantastic character of landscape. Structure of pile-work. Rock-rabbits. Rock-rabbits' feet. Nile cataract in miniature. The *Tinnea æthiopica*. Seriba Karo on the Wohko. Reggo and its breed of dogs. Kurraggera. Aboo Sammat's festivities. A speech of the Kenoosian. Aboo Sammat and the subjugated chiefs. Deragoh and its mountains. Kuddoo on the Roah. Fear of lions in the forest of Geegyee. Return to Sabby. The Mittoo people. Inferiority of race. Disfiguration of the lips by Mittoo women. Fetters of fashion. Love of music.

I SPENT December and January in a tour of considerable extent through the adjacent Mittoo country, being desirous of visiting some Seribas recently established by Aboo Sammat, and by means of which he had extended his frontiers far onwards towards the east. I obtained ten bearers for the transport of my baggage, and a Nubian captain of Aboo Sammat's company was expressly appointed to act as guide and to provide for my accommodation all along the route. I was accompanied likewise by three of my own Khartoom servants.

A short journey to the north-east brought us to Boiko, where, enclosed by a dense forest, was situated Aboo Sammat's harem. A lady here, the first wife, a daughter of the Niam-niam chief Wando, although she did not permit herself to be seen, was near at hand to do the honours: she was so

far civilized that she entertained me with coffee and several Khartoom dishes.

Proceeding eastwards we reached the little river Tudyee, which, flowing past Sabby at a distance of about two leagues to the east, ultimately joins the Roah (the Nam Dyow of the Dinka); at this time of year it is about twenty feet deep, and murmurs along a channel from twenty to thirty feet wide; now and then it forms deep basins, which never fail to be full of fish. We made our first night-camp near a fine tamarind, which will probably for years to come be a land-mark as conspicuous as it was at the time of my visit; it was the usual halting-place of all caravans from east to west, and the traces of previous encampments, dilapidated straw-hats, vestiges of fires and fragments of bones bore ample testimony to the fact.

At this season a slight dew was perceptible towards five o'clock in the morning. The nights were calm and, in comparison with the day, were considerably cooler than in summer, when in the interior of the huts there is hardly any difference in temperature to be distinguished. Throughout the day, however, a strong north wind blew incessantly, which towards the afternoon increased almost to a hurricane. There is a peculiar charm in these early morning hours, and no one can wake from his repose in a night-camp in the wilderness without a sense of calm enjoyment of the delights of nature. As soon as the horizon reddens with the dawn the solitude is enlivened by a chorus of ring-doves, here the most frequent of their kind, and by the cackling of guinea-fowl. The traveller is aroused daily by their serenades, and, without much strain upon his imagination, he could almost persuade himself that he has been long resident in the same spot, so familiar does the cooing of the doves become.

As we were preparing to continue our march, some people came to meet us with some dismal intelligence from the

neighbouring village of Geegyee. They said that on the previous night a Nubian soldier, who had laid himself down at the door of his hut, about five paces from the thorn hedge, had been seized by a lion, and, before he could raise an alarm had been dragged off no one knew whither. I now learnt, that this district had for some years been infested with lions, and that lately the casualties had been so frequent that the greater part of the inhabitants of Geegyee had migrated in consequence. The entire village would have been transplanted long ago, but the lions had been always found to follow every change of position. At seven o'clock in the morning we reached the ill-omened spot, the poorest of neglected villages, surrounded by woods. A thorn hedge formed its enclosure but nowhere could we discover an entrance. Although the sun was now high, the inhabitants, terrified lest the lions should be near, were still sitting either on the tops of their roofs or on the piles that supported their granaries. Speechless and depressed with fear, my people proceeded on their journey: every one kept his gun in hand, and the bearers, listening anxiously at every rustle that broke the stillness, peered carefully after any traces of the dreaded foe.

After a good day's march we arrived at Aboo Sammat's Seriba Dokkuttoo, lying on the extreme east of the frontier of the Bongo; it was about twenty miles from the chief Seriba Sabby, being somewhat further to the south. Half a league before we reached Dokkuttoo we had crossed a considerable, though only periodical stream, called the Mokloio. It was now five feet deep, meandering over a low flat fifty feet wide to join the Roah.

The Roah is a river of about the same size as the Tondy, with which it finally unites itself; it here makes a remarkable bend from south-east to north-east, but its general direction for some distance in this district is due north; the stream flowed between banks twenty or thirty feet in

height; its average width was full forty feet, whilst it was only three feet deep; the velocity of the current was one hundred and twenty feet a minute. The grass flat covered by the Roah at the time of its inundation is not so wide as that covered by the Tondy at Koolongo; it measured barely half a league across, and I therefore conclude that this river carries northward a volume of water smaller than the Tondy.

The Bongo were most assiduous in securing the large supplies of fish offered by the Roah. Across the stream in many places was thrown a kind of weir like a *chevaux de frise;* this they stopped up with bunches of grass and so formed a small dam; over the open places were set creels, and altogether a rich produce rarely failed to be obtained. Some miles up the river, where the banks are shut in by impenetrable reeds, is a favourite resort of hippopotamuses, and it was said that, two years previously, the natives had killed no less than thirty in a single day. The brutes had been driven by the low condition of the water to seek the deeper basins of the river-bed, whence all escape was impossible.

We remained in Dokkuttoo for two days, of which I made the most by excursions in the neighbourhood. A small slave caravan, containing one hundred and fifty girls and children, happened to be passing through the Seriba; it was conducted by traders coming from Ghattas's and Agahd's territory in the east. The whole party huddled together for the night in a couple of huts, several old female slaves being entrusted with the supervision of the children. I was a witness of the arrangements for the evening meal, and, contrary to my expectation, found that everything was conducted with much system and regularity. The old Bongo people of the neighbouring villages had brought fifty bowls of dokhn-groats, and as many more containing sauces prepared from sesame-oil, Hyptis-pap, and dried and

powdered meat or fish, and other comestibles of gourds and wild Melochia.

My own entertainment was well provided for, and the agent had an extra bullock slaughtered in order that my little company should not proceed without the supply of meat necessary for the journey. Every mouthful of food that I swallowed in this unhappy country was a reproach to the conscience, but the voice of hunger drowned every higher emotion; even the bread that we ate had been forced from the very poorest in the season of their harvest when their joy, such as it was, was at its height; they probably had neither cow nor goat, and their little children were in peril of dying of starvation and only dragged out a miserable existence by scraping up roots. The meat, in the abundance of which we were revelling, had been stolen from poor savages, who pay almost a divine homage to their beasts, and who answer with their blood for the stubbornness with which they defend their cows, which they hold dearer than wife or child.

Leaving Dokkuttoo, we proceeded for three leagues to the south, passing through the light bushwood that skirted the left bank of the Roah. The woods lay close down to the river as it flowed between its rocky banks. We crossed the stream near some huts, already inhabited by Mittoo, of which the name of the local chief was Degbe. Further south our path again and again crossed wide meadow-flats containing water-basins almost as large as lakes, which, as they had no perceptible current, had every appearance of being ancient beds of the Roah. Several larger kinds of antelopes, water-bucks, and hartebeests appeared, and a herd of thirty leucotis challenged me to a chase. At night, at our bivouac in the forest, we enjoyed in consequence a fine feast of the savoury game. Between the Roah and the Rohl the previous uniformity of the rocks began to be broken by projections of gneiss and by scattered hills. About ten

leagues from Ngahma we passed a remarkable spot of this kind, where huge blocks of stone rose in mounds from which colossal obelisks might be hewn. These elevated places alternated with extensive flats level as a table top.

Ngahma was Aboo Sammat's most important settlement amongst the Mittoo. It lies in a S.S.E. direction from Dokkuttoo and derives its name from the elder of the people, who, with his twenty wives, resides at no great distance; by the natives it is called Mittoo-mor. From Ngahma I turned north-east towards Dimindoh, a small settlement of elephant-hunters belonging to Ghattas's "Gebel company," as the people style his establishments on the Bahr-el-Gebel. The district was the highest elevation between the Roah and the Rohl, the country being more diversified by defiles, clefts, and periodic streams than that which I had previously traversed. Dimindoh lay on the further bank of a little river called the Wohko, which, during our march, we had repeatedly to cross. The stream flows over a course of some seventy miles without any perceptible increase in its dimensions, a peculiarity that I have again and again observed in many other small rivers, which seem to flow across wide tracts of country unchanged in their condition by the affluence of any spring or running brook.

An excellent reception awaited me in Dimindoh. The hunting-village had been lately built of straw and bamboo at a large outlay, and there were regular straw palaces, of which the new domes and roofs gleamed with all the golden glory of Ceres. To say the very least, our rest was quite undisturbed by rats, and the idyllic abodes still retained the pleasant aroma of the meadows. I had no cause to complain of the entertainment in any of the smaller Seribas. I was always supplied with milk and with all kinds of meal. The traditional spirit-distillery of Ghattas's people was here also in full swing, and they brought to me, in gourd-shells, a concoction which was not so utterly bad as that at Gurfala.

I was, however, much bewildered by the constant solicitations for my medical advice. Amongst other cases they brought me a Nubian, who, on his excursions, had received such cuts from the grass that his feet had completely rotted away, leaving the tendons still hanging. These people have no rational way of treating their wounds, but when there is any inflammation they endeavour to allay it by corn-poultices and hot water, a proceeding which always aggravates the evil. I saw some who had lost several toes, and others who had the most revolting sores on the shins and insteps, and in nearly every case these had arisen from insignificant cuts which, simply from mismanagement, had terminated in disease.

"It is a strange thing," I said to them, "that the grass is only bad *here;* it must be something more than that; it is a punishment from God."

"But God," they answered, "does not give us such grass in Dongola; this is a bad country."

"Do you mean to say then," I replied, "that God is kind in Dongola, and unkind here? No; I tell you, God is Himself punishing you for all your thievery, because there is here no other ruler to look after your misdeeds."

I felt that I was quite justified in talking in this fashion to a people who, under the cloak of religion, are as unscrupulous rascals as any in the world, and who, misinterpreting the mottoes on their banners which incite them to war against the infidel, consider all plunder perpetrated on defenceless savages as heroic actions bearing them onwards to the palms of Paradise.

The chief Seriba of this eastern section of Ghattas's establishments lies only a league and a half to the north-east of Dimindoh, and was called Dangadduloo, after a certain Danga, who had been appointed the head of the Mittoo of the district. In 1863 the brothers Poncet of Khartoom had ceded to Ghattas their settlements amongst the Agar, on the

Rohl, in order to found fresh establishments in the following year near the cataracts of that river, among the Lehssy. The Agar, as I have already mentioned, had managed to obtain possession of a considerable quantity of firearms and ammunition, and had made themselves so formidable that the Khartoomers had not ventured to rebuild the Seriba that had been destroyed: for that reason, the settlements of Ghattas had receded southwards to the region in which I now found myself. Our road lay often across wide gneiss flats, which not unfrequently exhibited the same uniformity for several hundred yards together. From the surface the stone broke off in smooth laminæ, often as thin as the cover of a book, and afforded me a convenient material for pressing my packets of plants. We had crossed the Wohko for the second time at Dimindoh, where its bed was about fifteen feet deep: its course is generally due north, but here it bends at a right angle to the east, as if seeking the shortest route to join the Rohl. The little river abounds in shells, especially in Anodontæ, which are turned to many domestic uses by the natives, while the massive *Etheria Cailliaudii*, not unlike the oyster, forms continuous banks in all these minor streams.

In Dangadduloo I found two applicants both eager to obtain the appointment as superintendent of the Seriba. One of these had accompanied the last caravan of supplies from Khartoom, and now was not acknowledged in the Seriba by the soldiers, who reproached him for having acted fraudulently. He was a Copt, and, as far as I know, the first and last Khartoom Christian who ever ventured amongst this set of fanatics. The other agent, named Selim, was a negro over six feet high, and by birth a Dinka; he had the majority of the inhabitants of the Seriba on his side, and lived in continual contention with his rival about the surrender of the stores brought from Khartoom. Both of these men received me with a great show of friendship, and each strove to outdo the other in politeness; they con-

sidered that a great deal might depend upon the answer that I should give their master on my return to Khartoom, when he would probably ask my opinion of their respective merits. Each maligned the other, and almost in the same terms; they were both, moreover, throughout the two days which I spent with them more or less in a state of intoxication.

Wherever I entered a Seriba there was almost invariably brought to my hut, according to the Soudan fashion of receiving strangers, a cooling draught, consisting of a kind of *cold cup* called Abrey. It was made in the simplest manner from highly-leavened bread, dried and crumbled into water; its flavour is agreeable, and travellers can hardly say too much in its favour: it is a preparation, however, that can only be made of sorghum bread. In addition to this the people are accustomed, according to patriarchal usage, to bring water to wash the stranger's feet. When these preliminaries had been gone through, I had then to take my seat upon the "angareb" or couch, which was generally covered with an elegant Persian carpet, and to await the visits that would be made me.

A succession of unknown personages ordinarily came, who made a reverent salaam and then silently and with mysterious air placed before me flasks, calabashes, and gourd-shells containing butter, milk, honey, spirits, merissa—in short, every delicacy that the country could offer. My people revelled in this abundance, and ever rejoiced at the happy thought which had impelled me to this tour, and that I had brought them from a land threatened with famine into this region of corn and cattle. The fact of a large number of the herds having been stolen, and that the territory was adjacent to the territory that had been plundered, gave rise to the risk of a nocturnal attack by way of reprisal: on this account numerous watches were set every night and the environs were patrolled, but no

sooner had the sun gone down than the entire community abandoned themselves to a general intoxication, so that I should never have been astonished if the Dinka had ventured on a surprise, which would have had every likelihood of being crowned with success.

The Mittoo of this district are called Gheree. Southwards and far to the east of the Rohl the general name of Moro is applied to the country, and as tribes of distinct people have settled there, it may no doubt be considered as a true geographical designation of the land itself; it is, however, the only example which came under my notice throughout the entire region of the appellation of the people and the land not being identical.

Favoured by the partial destruction of the high grass by fire, the natives were diligently setting about their great hunt. Battues, with nets, pits, and snares, were set on foot in every direction; the strong bows with curved handles, by means of which a lasso can by skill be thrown round a buffalo's legs, being in general use. In the villages I observed many trophies of the chase in the shape of some splendid horns of buffaloes and eland-antelopes.

As I went on due east towards the Rohl, I was obliged to be carried, on account of having a sore foot. This I found a matter of some difficulty, on account of the want of any suitable litter, and because the paths are all so narrow that there is no space for two persons to move abreast, while the difficulty was still further increased by the negroes refusing to carry the heavy angarebs in any way except upon their heads. Wherever Islamism has its sway in Africa, it appears never to be the fashion for any one to allow himself to be carried: this arises from a religious scruple which might with advantage be applied by Europeans to nations under their protection. A strict Mohammedan reckons it an actual sin to employ a man as a vehicle, and such a sentiment is very remarkable in a people who set no

limits to their spirit of oppression. It is a known fact that a Mohammedan, though he cannot refuse to recognise a negro, denying the faith, as being *a man*, has not the faintest idea of his being entitled to any rights of humanity.

The country on the left bank of the Wohko appeared well cultivated, and we frequently passed through fields from which crops of Penicillaria had been gathered. Three leagues from Dangadduloo there was some low meadow land, and, for the first time since leaving the Dyoor, I saw an extensive range of Borassus palms, their lofty stems, 80 feet in height, crowned with waving plumes of fan-shaped leaves. Beneath their shade nestled the huts of the Mittoo chief Bai, with whom we took our noonday rest. In the afternoon we retraced our steps for a couple of leagues, in order to put up for the night in the village of another chief, named Gahdy. Towards the north-east some important heights now showed themselves on the horizon beyond the Rohl, and after awhile I was able to settle certain angles so as to determine their relative bearings. By this means, for the first time, I ascertained that my route must be near the points which had been reached by former travellers, and I could with certainty identify Girkeny, relatively about 200 feet high, with the locality marked on Petherick's map.

It afforded me much amusement to watch the natives at their ordinary occupations in their pent-up dwellings, and my portfolio was enriched by the drawings of many of the household utensils, as well as of the personal ornaments which the Mittoo women possess in great abundance. These women are the most frightful that ever yet I had seen, and the horrible manner in which they mutilate their lips contributes a great deal to increase their repulsiveness. Elsewhere this practice is generally confined to the women, but here the men were similarly disfigured, and in Gahdy's village I was visited by a man from whose upper lip there

hung a pendant of polished quartz more than two inches long.

Just behind the village we came once more upon the Wohko, which had here more perfectly assumed the aspect of a river, being forty feet in width. It had now entered upon the wide low-lying steppe which extends to the western shores of the Rohl. We were nearly two hours in crossing this tract, which was densely covered with grass so high that, although in my litter I was six feet above the ground, I had to raise myself to catch sight of the adjacent mountains.

It is worthy of notice how all the rivers that I visited in this region, such as the Dyoor, the Paongo, the Tondy, the Roah, and the Rohl, of which the course was almost directly from south to north, in spite of the slight diminution of the velocity of the earth's rotation in these low latitudes of 6° or 8°, follow that law, exemplified in all rivers flowing northwards, and which is dependent on the rate of rotation of the earth. The course of all alike was nearly coincident with the eastern edge of the uniform steppes that covered the districts subject to their inundations. Along the western shore of the Dyoor and Paongo the steppes in many places could not be crossed in much less than an hour, whilst those on the east could be traversed in little more than ten minutes. In the same way it takes forty minutes to cross the western flats on the Tondy near Koolongo, but those on the opposite bank are easily passed in a sixth of the time. Here, too, upon the Rohl there are no flats at all upon the right-hand shore, but the river for some distance washes past a steepish bank on which lies Ghattas's Seriba Awoory. This bank is formed by the slope of the Girkeny, only about two leagues away.

The Rohl contains a much larger volume of water than the Tondy, and near Awoory its bed divides into several branches, which in the winter are separated by sandbanks

of considerable height. In the higher parts some stagnant pools remain, which, as they evaporate, fill the lowland with swampy humour. On the 17th of December I found the width of the river to be seventy feet; its depth was only about two feet and a half, but it was overhung by sandy banks twenty feet high, which were covered with reeds; its current moved at the moderate rate of about a hundred feet a minute. The river must offer an imposing sight in the height of the rainy season, when the plains are entirely under water; it must, then, apparently rival the Dyoor, although it does not contain more than a third of the quantity of water. Marked on existing maps under the name of Rohl, it is called by the Dinka the Nam-Rohl, *i. e.*, the river of the "Rohl," which is a tribe of the Dinka people. The Mittoo, the Madi, and other tribes along its course give it the name of Yahlo, whilst among the Bongo it is known as the Dyollebe. This is a fresh instance of what may be found throughout Africa, where the names of rivers, towns, and chiefs continually recur, and where Ronga and Mundo are almost as common as Columbus, Franklin, and Jackson in North America. The term Kaddo or Kodda, which appears on some maps, seems superfluous, since in both the Mittoo and Behl dialects the word means only "a river," or generally "water."

At Awoory a reception grander than usual was prepared for me. From my elevated position I could distinguish that the ant-hills were covered with black heads and that hundreds of inquisitive natives had collected to gratify their curiosity about me. As I entered the Scriba, fifty men were drawn up before the gate, under orders to honour me by firing a salute. Something of a feeling of misgiving quivered through me, and it was a relief to recollect that I was up in the air, and so comparatively safe from the shots that were to be fired on the ground.

The natives around Awoory are called Sohfy, and are the

same as the Rohl, who dwell further east. Their language in some respects resembles those of the Mittoo and the Bongo, although there are points in which it differs materially from both. In appearance and habits, the Sohfy bear a close affinity to the Mittoo. The three mountains to the north of Awoory are also inhabited by the Sohfy; Girkeny, the loftiest of these, is about three leagues distant, and consists of a bright mass of gneiss, which descends abruptly towards the south in precipices 200 feet apart. Petherick's route in 1863, between Aweel and Yirri, lay across this mountain. Nearer the Seriba is a little hill, with its villages of Nyeddy, Yei, and Madoory, all of which are tributary to Ghattas.

About a day's journey to the north-east there rises a lofty table-land, upon which the name of Khartoom has been conferred by the natives, in order to denote its importance and impregnability as a stronghold. Its inhabitants are respected by the people of the Seriba for their bravery in war, and are particularly renowned for their skill in archery: although they have been repeatedly attacked, the aggressors, ever unsuccessful, have been obliged to retreat with a large number of killed and wounded. A few weeks previously the population of this Mount Khartoom had attempted to surprise the Seriba, which most probably would not have escaped entire destruction, if the garrison of the neighbouring Seriba of the Poncets had not opportunely come to its relief.

The Nubians apply the general term of Dyoor to all the tribes on the Rohl to the south of the Dinka territory, although the tribes themselves, having nothing in common either in language, origin, or customs with the Dyoor of the west (a Shillook tribe), repudiate the definition. The designation was adopted from the Dinka, who thus distinguish all tribes that do not devote themselves to cattle-breeding. Petherick was in error when he imagined that the Dyoor

country known to him in his earlier travels extended so far as to include the Rohl: he would have escaped his misapprehension if he had only noted down a few of the characteristic idioms of their language.

Whilst I was in Awoory my foot became so much worse that for two days I was almost entirely incapacitated. Externally there was only a slight spot on the sole of the foot, but the entire limb had swollen with inflammation. I had every reason to fear an outbreak of guinea-worm, and therefore resigned myself to the cheerless prospect of being invalided for several weeks. Unable to carry out my intended trip to the attractive mountains of the neighbourhood, I had no alternative but to submit to my disappointment, and, without accomplishing my hopes, I was compelled to bid farewell to Awoory. For six days I had been confined to my litter, and meanwhile all search for plants, all the enticements of the chase, and all investigation of the implements peculiar to the villages had to be given up. Enthroned again on the heads of four sturdy negroes, I proceeded on my way. Through my position, my range of vision was somewhat enlarged, so that I had a little compensation for my helplessness in a more extensive prospect over the pleasant country. Pain, too, was subsiding, and no longer engrossed my care. The bright sky above, the still solitude of the steppes around, the mild air of the tropical winter, and the unwonted ease of my mode of progress, all combined to lull me into gentle reverie. The slight rustle made by the footsteps of the bearers among the yielding stalks was the only sound that broke my silent contemplations, and I could almost imagine that I was in a light boat, being driven by an invisible power across the waves of a sea of grass.

Until we passed the Rohl the road lay in a S.S.E. direction, close along its right-hand bank. Inland, the country appeared to ascend in gently-rising terraces, but the character

of the vegetation continued entirely unaltered, the bush-forest being composed of trees and shrubs of the same kind that I had observed ever since we had set foot upon the red soil. At the place of our transit the stream was undivided; but, although it was 200 feet in breadth, the water was little more than knee-deep. The numbers of fish were quite surprising, and our negroes amused themselves by darting with their arrows at the swarms of little perch, never failing to make good their aim.

On the opposite bank we entered the territory of another small but distinct tribe called the Lehssy, whose dialect differs from both Mittoo and Sohfy. Its narrow limits extend for a few leagues to the east of the river as far as Kirmo, which was one of the places visited by Petherick. Beyond again are the settlements of the Bohfy, in whose territory, a day's journey to the east of Mvolo, Agahd maintains a Seriba, which is situated on the Ayi, a river which, according to Petherick, contains less water than the Rohl and joins the Dyamid before it enters the Bahr-el-Gebel. To the north of the Bohfy dwell the Behl, who, together with the Agar and Sohfy, possess such wealth of cattle as to provoke continual raids on the part of the owners of the Seribas. Behind the Behl again, towards the Bahr-el-Gebel, are the Atwol, a people much feared for their warlike qualities, rendering the approaches to the Meshera of that river so unsafe that caravans are often in considerable danger of attack.

After crossing the Rohl we proceeded a mile or two to the S.E., and arrived at Poncet's Seriba in Mvolo. The character of the scenery had now entirely changed, and large blocks of granite, at one time in solid cubes, at another in pointed obelisks, started from the ground. On the north of the Seriba, and a little above the place where we forded the river in coming from Awoory, these rocky projections caused the stream to fall into rapids, which, on a reduced scale, bore a resemblance to a cataract of the Nile. This chain of

scattered rocks, which runs across the country from west to east, has been mentioned by Petherick ('Travels in Africa,' vol. ii.) as extending to the south of the village of Dugwara.

The agent in Mvolo, who had been for many years in the service of the brothers Poncet, received me most courteously. As I entered within the palisade of the Seriba, a hundred men saluted me after the fashion of the country, and even some shots were fired from a small piece of naval artillery that stood in the gateway. However honoured I might feel by this polite reception, I could be conscious of nothing but vexation at the sight of the blood-red banner with its crescent and extracts from the Koran. I had flattered myself in vain with the hope that here at least the cheerful waving of the tricolour—often but a mockery—would proudly assert the authority and independence of the Frank. My people had repeatedly declared that they would on no account follow under my flag, and I had no means open to me of convincing them of their error. The unfurling of the Mohammedan banner over the possessions of a Frenchman is a practical demonstration of the limited measure of authority which is really exercised by the Khartoom merchants over their dependents in the interior. There is not a single Christian in the settlement, so that the condition of things is not worse than might reasonably be anticipated. Such, at any rate, is my opinion, and I do not doubt but that any fellow-countryman of Poncet's would either hold his peace or pass a judgment even sterner than mine.

In all these countries the slave-traffic is a fact tacitly acknowledged quite as much as the transactions of the minor speculators on our own exchanges, and the brothers Poncet had much odium to endure from being held responsible for the delinquencies of their subordinates in this respect. These accusations, combined with the difficulty of maintaining a proper control over the conduct of their people, made them hesitate to increase the number of their settlements; their

insignificant profits, moreover, did not allow them to stand against the competition of the neighbouring companies, who shrunk from no means, however unlawful, for enriching themselves. At length the brothers Poncet had become weary of the illegitimate proceedings that went on covertly in defiance of their authority, so that a year previously they had disposed of their establishments to the Egyptian Government, stipulating for a period of three years for a payment of a percentage on the entire produce of ivory at the current rate of interest. Such were the circumstances under which the last European firm withdrew from the ivory trade, which had really been originated and established in the countries of the Upper Nile by Europeans alone. The Egyptian Government had looked forward to the monopoly of the ivory traffic as so likely to be lucrative that they paid a large sum for its purchase.

Mvolo was practically the nearest point to the region which was most productive of ivory, and there was a direct route from the Rohl to the Monbuttoo which avoided the hostile territory of the Niam-niam. Latterly, the Poncets had sent out two expeditions in the year instead of one, and had thus doubled their previous annual profits through having resources which were not available to any other establishment. But, in spite of everything, the authorities at Khartoom must have advised the Government very badly, for almost immediately after the discharge of the grant allowed to the Poncets the settlement passed into other hands, and Ghattas junior obtained for himself and for his heirs the whole of the productive territory.

Many may think that a resolution of the Government to monopolise the ivory trade in this district would augur well for the future, and that the results would inevitably tend towards a reform of the existing club-law, but it is really very doubtful whether such a change would benefit the poor oppressed natives. It is true that by a larger outlay of

capital than the Khartoom merchants can afford the profits might be considerably increased, and many sources of produce yet undiscovered might be brought to light; but, as I have said before, there can never be ensured a proper representative effectually to secure the interests of the Viceroy. All these enterprises are more or less involved in the slave trade, and a military occupation could not be thought of, because only Nubians can endure the climate, and Nubians would never submit to a regular discipline. Of the ineradicable propensity to slave-dealing which has always shown itself in every Government official, be he Turk or Egyptian, I will say nothing; but I may venture to observe that neither a regular system of taxation nor the suppression of the slave trade in the Upper Nile countries is possible until Egypt shall have made good its footing in Darfoor, that great nucleus of the Central African slave traffic, which has hitherto been a place of refuge for all the criminals in the Egyptian Soudan, and which affords a continual loophole of retreat for every outlaw of Khartoom. The threat so often heard in the quarrels of the people, "I will murder you, and escape to Darfoor," is a striking illustration of the estimate in which the district is held.

The inhabitants of Mvolo call themselves Lehssy, and in many particulars of their habits they resemble the Mittoo and Bongo. In the huts I frequently observed some singular wooden figures, the Penates of the establishment, which had been erected to the memory of a departed wife. Petherick describes the graves near Kirmo as adorned with forked boughs, and bits of wood carved into the shape of horns, exactly as I noticed them on the graves of the Bongo.

The district produces plenty of corn, and with its ample opportunities for hunting and fishing supports a tolerably large population, which has every appearance of being well fed. The Lehssy generally are of a medium height, but I came across individuals of a strength of build such as I saw

nowhere else except among the Niam-niam. I was also struck by the frequent occurrence of feet and hands disproportionately large. Dongolo, the native overseer of Mvolo, was, on account of his stoutness, called "bermeel," a barrel; and another of the inhabitants was nicknamed "elephant-foot."

Distinct, in some respects, from what I had already seen was this district of Mvolo. Far as the eye could reach, there extended a wide grassy plain, broken by huge stones of fantastic outline and by thickets or single trees. Graceful fan-palms waved above the groves, and the autumn tints gave a rich colouring to the scenery, every rock, with its covering of creepers, being a picture in itself. In the north could be seen the three mountains near Awoory, like purple peaks in the pale azure of the horizon. In the far distance the country had the deep blue of an Italian sky, mellowed as it came nearer into peculiar tints of grey and golden brown; whilst close to the foreground all was bright with the varied hues of foliage, red, yellow, and olive-green alternating with the freshness of the sprouting shrubs, the Indian red of the ant-hills, and the silvery grey of the jutting rocks.

The Seriba, like its environs, was unique of its kind. The formidable appearance of the confused pile-work would have spoilt the night's rest of any one who had a very sensitive imagination. Something like a picture I remember of the Antiquary's dream, only without the sea, did the complication of huts stand out against the tall blocks of granite from which the fan-palms started like proud columns. The huts themselves, on their platform of clay, were like paper cones on a flat table. In front was the great farmyard, with its hundreds of cattle under the charge of Dinka servants. These neatherds erect for themselves crooked awnings on equally crooked piles, and sit huddled up on a soft bed of ashes round the ever-glowing dungheaps, inhaling with delight their favourite fumes. These pile-works undergo

I. VIEW IN THE DISTRICT OF MVOLO. *p.* 384.

I. PONCET'S SERIBA IN MVOLO. *p.* 384.

many modifications in design, and have been imitated from the strongholds made by the natives when they were still masters of the land. The principal use of these structures is to afford places of refuge from hostile attack.

Quite in keeping with the fantastic scenery and eccentric architecture is the peculiarity of the rock-rabbits that dwell among the crevices of the gneiss. Immediately after sunset, or before sunrise, they can be seen everywhere, squatting like marmots at the entrance to their holes, into which, at the approach of danger, they dart with wonderful snorts and grunts. The noise they make has caused the Nubians to bestow upon them the general name of "kako." There is, however, a great variety of species, hardly distinguishable from each other, scattered throughout the Nile countries, every district seeming to present its own special representative of the race. Not only are they found in the mountains of Abyssinia and of Upper Sennaar, but they inhabit those isolated mounds and hills which give its peculiar character to the landscape in Southern Kordofan and the province of Taka. Again, they appear in the mountains of the Bayooda steppes, and play a prominent part in Southern Africa; whilst other species are found in Arabia, in the Sinai peninsula, and in the Syrian mountains. Those that I saw in Mvolo nearly correspond with the Abyssinian species depicted by Bruce. They appear to feed chiefly on the bark of trees, although they occasionally devour young shoots and grass.

Abdoo, the controller of Mvolo, was half a naturalist: as a huntsman he had done service under many Europeans, and had acquired a reputation for being a skilful stuffer of birds. He drew my particular attention to the good sport afforded by the rock-rabbits, as they crept about in tempting proximity to the gate of the Seriba. At the same time, he asked if I could account for the wonderful way in which the animals managed to clamber up and down smooth rocks that were almost perpendicular.

"I can't tell," he said, "how it is, but when you have shot one of the creatures, and catch hold of it, it sticks to the rock with its feet, in its death struggles, as though it had grown there."

The under part of the foot is dark and elastic as india-rubber, and has several deeply-indented cushions.* This arrangement, which no other mammalia or warm-blooded animals seem to possess, enables the creature, by opening and closing the centre cleft, to throw off part of its weight and to gain a firm hold upon the smooth surface of the stone. The toes are nothing but pads of horny skin, without regular nails, the hind foot alone being furnished, on the inner toe, with one claw, which is sharply compressed. For some time I could not at all comprehend how, with such a plump foot, the rock-rabbit could climb so safely over precipitous walls of granite, or even along the polished branches of the little trees in the ravines; but the mystery was solved when I tried to pick up an animal which I myself had wounded. The granite was as smooth as pavement, and yet, when I seized the creature by the neck, it clung like birdlime to the ground, and required some force before it could be removed.

Although many other species of rock-rabbits or rock-badgers have been observed by scientific travellers, and although the animals take a conspicuous place in the fauna of Southern Africa, yet I have never come across any mention of this interesting circumstance. My observations may be discredited, but I have endeavoured to render them as accurately as possible, in the hope that future travellers will give further attention to the subject.

The largest specimens that I killed were females with young, and they measured about ten inches in length. They were remarkably like wild rabbits, of a grey tint; the males being much lighter, and having a sharply-defined white stripe

* Bruce (vol. v., description of plate 24) expressly mentions the circumstance of the soft flesh standing up high on both sides of the indentation.

running about two inches along the middle of the back. The females of this species produce two perfectly-developed offspring at one birth. The flesh is like that of a common rabbit, and quite as much requires an artificial dressing to make it palatable.

Other interesting animals find their habitats among the rocks of Mvolo. The pretty little tan-coloured squirrels (*Sciurus leucumbrinus*), with two white stripes on either side, of a kind which is often seen on the steppes of Nubia, are here very abundant. There are also swarms of agamas, nodding their orange-coloured heads; the movements of these creatures are anxiously watched by the rock-rabbits, which first utter a note of alarm, and then retreat as nimbly as marmots to their holes, from which they never venture far away. Not unfrequently have I waited half-an-hour before their heads have appeared again.

The inevitable Guinea-fowl, of course, was to be found running through the grass, also a kind of francolin, the cocks with tails erect, like little bantams. As my good entertainment in the Seriba made me independent of the chase for my sustenance, I only killed a few specimens of this pretty bird. Francolins, which abound in other parts of Africa, are very rare throughout the district of the Gazelle. On the third day after my arrival in Mvolo, I was once more on my feet and able to take an excursion to some rapids about half a league to the north-east. The river divides into three branches, and rushes impetuously over a bed chequered with blocks of granite. Two of the larger islands were covered with dense bush-woods, and a charming hedge of borassus-palm lined the banks. The main stream passes in equal parts through the northern and southern arms. The first of these forms a precipitous fall of fifty feet, and, wildly foaming, dashes into the hollow among the rocks—the entire descent of the river at these rapids being at least a hundred feet. The river makes a bend

round the Seriba, and a quarter of a league to the east, above the falls, it is once more flowing in its ordinary bed, which is a hundred feet wide. The smooth blocks of stone were as clean as marble, and the water between was as clear as crystal; the fan-palms and luxuriant bushes spread a cooling shade over the pools, and everything conspired to form a spot that might be consecrated to the wood-nymphs and to the deities of the streams. It was a place most tempting for a bath—a pleasure from which I had been long debarred. The noxious properties of the waters which I had hitherto visited, as well as the dread of fever, had obliged me to forego all such pastimes; but now I thought I might indulge without fear of evil consequences. Fish are here so abundant, that whoever bathes is liable to find himself molested by their bites.

I rambled about the woods on the slopes of the opposite valley, and made many an interesting discovery. In great luxuriance grew a remarkable cucumber (*Cucumis Tinneanus*), which is covered by curious and long appendages. Throughout the district of Mvolo a shrub, which has already been naturalised in our conservatories under the name of *Tinnea æthiopica*, is particularly plentiful; its wood is used by the Nubians for pipe-stems. Its boughs, like those of the weeping-willow, trail to the ground. I gazed with silent emotion on a plant which seemed to mourn the fate of the brave traveller by whom, with her tender appreciation of the beauties of nature, it had formerly been delineated.

At a short distance to the north was pointed out to me the village of Dugwara, where the natives, as we could hear, were performing on their nogara.

I had now reached a point at which my route, for the first time since I left the Meshera of the Bahr-el-Ghazal, came in contact with localities whose position is pretty well determined. Mvolo itself had never been actually visited by its former owners, but in 1859 Jules Poncet, during the course of his extensive elephant hunts, had crossed the Rohl somewhere below

this spot.* The route of the British Consul, J. Petherick, in 1863, lay along the opposite bank of the Rohl, and through Dugwara. My own surveys, corresponding as they did with other routes which had preceded my own, offered very satisfactory results; they agreed very accurately in establishing the position which had been assigned to the Meshera on Arrowsmith's map† of Petherick's travels between 1858 and 1863, so that I had occasion hardly at all to shift the geographical position of Dugwara. On all earlier maps the Meshera was invariably marked too far to the west, and the Gazelle was carried half a degree beyond its actual length. The time I occupied, both on my outward and homeward journey, in the navigation of the river, allowed me ample opportunity to verify the correctness of these calculations of my own. I do not know what materials Arrowsmith had at command to authorize him in making the fortunate amendment; Petherick certainly did not agree with the alterations, and, according to his computation, the longitude of this section of his route on the Rohl would have been twenty miles further eastwards than on Arrowsmith's map—a position which, for various reasons, must be improbable.

I had to undergo many little discomforts before leaving this interesting region. The black soldiers and slaves belonging to the Seriba thought that, because I was a white man, I must be the actual brother of the owner, and accordingly they came to me with all kinds of grievances. Contrary to the Controller's orders, a number of Niam-niam soldiers insisted on following me everywhere, and I was obliged to remonstrate with them rather sharply, to make them understand that I could not permit them to join my people, and that my retinue was large enough already. The female slaves betook

* 'Le Fleuve Blanc: Notes géographiques de Jules Poncet,' is the best publication on the White Nile that I know. It gives reliable details of J. Poncet's interesting journey, and specifics many characteristics, founded on some years' experience of the different people of the district.

† Journal R. G. S., vol. xxxv.

themselves for refuge to my hut, bringing their complaints of the rough usage they received from their angry owners, but which it was only too probable they deserved for their faithlessness. The Nubians, on their part, were loud in demanding judgment from me as to their claims on some or other of these runaway women. I can only say that I was very glad to make my escape, and to find myself afresh upon my journey to the west. I was accompanied by a small herd of cows, calves, and sheep—a present from the controller, who, moreover, forced an excellent donkey upon my acceptance.

After a stiff march of seven leagues and a-half, through a district with few watering-places, and little interest beyond occasional clumps of the lofty kobbo-tree,* we were once more in the territory of the Mittoo, and had reached one of Poncet's smaller Seribas, called Legby. There was a second Seriba, named Nyoli, about three leagues to the south-east, which I did not visit, as its inhabitants were all busied with a grand *battue* for elands. These Seribas in the Mittoo country had only been founded in the previous year—they were on the direct road to the Monbuttoo, and had been intentionally pushed forward towards the territory of the Madi, in order to ensure advantageous quarters for elephant-hunting. The greater part of this region, which previously had been a sort of No-man's-land, had been recently appropriated to himself by a successful *coup* of the enterprising Aboo Sammat. From Legby to Ngahma was another five and one-third leagues. The road descended, in a W.N.W. direction, straight down to the Wohko, which we now crossed for the fourth time. We had also to ford two other of the rivulets that traverse the country, which is a good deal broken by hills and eminences. The ground had been quite cleared by the burning of the steppe, and although there had been no rain, a number of

* A new species of *Humboldtia* which unites the characteristics of the *Berlinia* with those of the *Crudya*.

perennial plants were sprouting up and covering the bare surface of the soil with their variegated bloom. Many of the trees, such as the *Combreta* and *Butyrosperma*, of which the flowers appear before the foliage, were in full blossom. Two especially attracted my attention, because they entirely fail in more northern regions—these were the *Xeropetalum*, with its beautiful bright-red flowers, not unlike mallows, and the *Stereospermum*, which bore grotesque bunches of bloom, resembling red thimbles. They were both in their full beauty, and to some extent reminded me of the floral luxuriance of the Abyssinian highlands.

While in Ngahma, I heard that Aboo Sammat, with his entire fighting force, had withdrawn from Sabby, for the purpose of inspecting his numerous Seribas in the south. It was his first year of possession, and he had gone to feel his way, preparatory to the taxation of the country. Meanwhile, all provisions had been exhausted in Sabby, and if I had ventured to return thither, it would have been at the risk of being starved. I therefore myself resolved to pursue my course in a southerly direction, in order to cast in my lot with Aboo Sammat, until the time drew near for our expedition to the Niam-niam country. The first halting-place at which we arrived, after a march of seven leagues, was the little Seriba Karo, in the Madi district. The road passed to the S.S.E. by a small mound of granite, of which the sterile flats were inhabited by rock-rabbits; we then advanced over granite flats until we reached a spot where an extensive table-land lay open to the south. Once again we crossed the Wohko, and proceeded along its right bank. The river here has all the characteristics of a periodical stream, and was now standing in lagoon-like basins. The width of the stony bed, and the deep holes washed in the huge blocks of granite, which are covered to a considerable height with the mossy *Podostemmonea*, are proofs of the abundance and violence of the water in the height of the rainy season. Looking

W.S.W., I was greatly surprised by the unexpected sight of some elevated rocky peaks. Amongst them, and about four leagues distant, was the point called Wohba, near Deraggo, which I afterwards visited. This isolated range extends as far as the Wohko, and there terminates in a ridge 80 to 100 feet in height. Near Karo the stream forms a defile 40 to 50 feet deep, enclosed by regular hills. The banks, which were very steep, were concealed by the impenetrable shade of magnificent trees (*Hexalobus*), reminding me very much of the true chestnut.

The Mittoo display a remarkable talent for music, and construct a great variety of instruments. The most important of these is a lyre with a sounding-board, not unlike the robaba used by the people of Nubia. The soldiers in all the Seribas manifest their African origin by the zeal with which in their leisure they practise the musical art. I noticed one of the Madi with a bamboo flute of quite an European pattern, and at my request he played what was really a very pretty air, which must have cost him considerable time and trouble to learn, so perfect were the separate modulations: when the Nubians heard him they paid him the compliment of saying that he played as well as any Frank musician in Alexandria.

From Karo I went on still southwards for three leagues to Reggo, another small Seriba belonging to Poncet's company, and where the elephant-hunters were quartered. The road thither led chiefly through cultivated fields that had been planted with Penicillaria. I also for the first time observed the culture of the sweet potato (*Batatas*), a favourite food of the Niam-niam. This had a singularly sweet taste, and a purplish rind, which occasionally deviated into white; the largest tubers of this in the Madi country never exceed the thickness of a finger.

The Poncets had founded settlements in this part of the country in order to hold their own against the wide incur-

sions which Aboo Sammat was making from his territory in the same direction. The company laid claim to the sole right of ranging the district, a demand which was only consistent with their original interest in the ivory produce. The hunters are called "Sayadeen," because they are armed with huge rifles, which have been gradually introduced into the country from Khartoom. Only a few days previously they had killed two elephants, which represented a whole year's success. In former years the Poncets had commanded the expeditions in person, and then a corps of these hunters would in a single year secure as much ivory as would equal the largest quantity now gathered from the aggregate of the Niam-niam lands. Although the period of which I speak was not more than fourteen years ago, these large collections have become completely things of the past. In the present Seriba district, it is now expected to make a journey of some days before there is any likelihood of catching sight of an elephant at all; the wary beasts, too, appear instinctively to know the regions in which they can be safe. They live to a great age, and I do not doubt but that all the oldest representatives of the elephant community have been at some time or other attacked by man, and that many have been actually under fire. In the Dinka country there are places such as I have already mentioned, in the woods of the Alwady tribe, where elephants may be seen during the rainy season. When I asked the Khartoomers why they did not go and get the ivory themselves, they always replied that such hunting would be a sorry failure, and that while they were shooting the elephants the natives would be shooting *them*.

In Reggo the soldiers were fond of breeding dogs, and the Seriba literally swarmed with the fat pups of the Niam-niam breed. I found, moreover, that the people managed to do a little quiet business for themselves by bartering dogs for slaves to the Mittoo. Dog's flesh, too, they enjoyed as much as the Niam-niam, and the price given for an animal affords

a proof of the relish they have for the dainty; the teeth form a favourite ornament for necklaces and stomachers.

The first of January, 1870, appeared, beginning a new link in the unbroken chain of time. It was the second New Year that I had commenced in Central Africa, and although for me the day passed quietly and with no rejoicing, yet I was filled with thoughts of gratitude that I had been spared so long. Although one cloud and another might appear to loom in the uncertain future, yet the confidence I felt in my acclimatisation enabled me with good courage to proceed upon my wanderings.

Goggo, a Mittoo-Madi Chief.

The next place that we reached was Kurragera, the most southern point of Aboo Sammat's newly-acquired territory. The march had occupied about five hours, and on our way we had for the sixth time crossed the Wohko. Previously we had halted in the village of one of the Madi elders, who bore the melodious name of Kaffulukkoo; I had also the honour of an introduction to another chief, called Goggo, of whom I was able to secure a portrait. His imposing peruke was not of his own hair, nor indeed was it hair at all, but consisted of an artificial tissue of woven threads, which were soaked with yellow ochre and reeking with grease.

Kurragera's Seriba, like Aboo Sammat's other settlements, had been entirely cleared of its soldiers, and only the local overseer of the Madi remained to look after the corn-stores. Inside the palisade were piled thousands of the bearers' loads, each neatly packed into a circular bundle, and protected by the simple and effectual coverings made by the natives from leaves and straw. These packages contained a preliminary portion of the corn-stores. Almost every product of the soil that I have described in Chapter VI. was here to be seen, and in addition were the sweet potatoes cultivated by the Madi.

Aboo Sammat at this time, with his whole available fighting force, was encamped on the Wohko about three leagues to the south. With the help of 250 soldiers, and more than 300 Bongo and Mittoo bearers, he had put the entire country in the south and south-east, from beyond the Rohl nearly as far as the frontiers of the so-called Makkarakkah, under contribution. The tribes in the more immediate neighbourhood were the Madi-Kaya, the Abbakah, and Loobah, which manifestly occupied the same district to which, in 1863, Petherick's agent Awat made an expedition. Many chiefs submitted voluntarily to the taxation; others remained hostile for a period, but afterwards surrendered all their stores to the enemy *à discrétion*. The region was so productive that the number of bearers did not nearly suffice to carry away the goods that had been seized. The enterprise was accomplished without any loss of blood.

I was compelled to stay for some days in Kurragera to await Aboo Sammat's return, and began to get somewhat weary, as amongst the flora I could find little that was suitable for my collection; I had besides used up all the pencils I had brought with me, and was obliged to write with hen's blood. Meanwhile, as in Awoory and Ngahma, I continued my study of the Mittoo language, and took a great deal of pains to unravel the intricacies of the Madi method of

counting, to which I shall have another occasion to refer hereafter.

The butter-trees were now in full bloom. The milky juice that exudes from the stems of these trees reminds one of gutta-percha, which is a secretion of a species of the same order of plants (*Sapotaceæ*). I often saw the children making balls with the lumps of caoutchouc, which served as universal playthings. In 1861, Franz Binder, the Transylvanian, formerly a merchant in Khartoom, brought a hundredweight of this india-rubber to Vienna, but although the material turned out very well in a technical point of view, the cost of its transport was too great for it ever to become an important article in the commerce of these lands.

On the 7th of January, Aboo Sammat, with the greater number of his soldiers and bearers, returned to the Seriba. He wished to display his authority in a way that should make an impression upon me, and therefore set apart an entire day for festivities on a large scale. His people were divided according to their tribes into groups of 500, and each of these had to execute war-dances worthy of their commander. Aboo Sammat himself seemed ubiquitous; in a way that no other Nubian would have done without fancying himself degraded, he arrayed himself like a savage, and at one time with lance and shield, at another with bow and arrow, danced indefatigably at intervals from morning till night at the head of the several groups; he was a veritable Nyare-Goio, *i.e.*, master of the ceremonies; here he was dancing as a Bongo, there as a Mittoo; then he appeared in the coloured skin apron of the Niam-niam, and next in the costume of a Monbuttoo: he was at home everywhere, and had no difficulty in obtaining all the necessary changes of apparel. Several of the Bongo of Sabby exhibited a talent for theatrical representations, and to the great delight of the Nubians they enacted the scene of how Aboo Sammat surprised and thrashed the Mukhtar Shereefee; they improvised

a recitative accompanied by corresponding action, the purport of which was to tell how Mukhtar was hit with a stick, and tumbled into the straw hedge crying like a Deloo-buck, "ba mi oah!" (alas! alas!). Then followed the refrain, "Madrislalla, illalla, illalla." Between the parts there was an incessant firing; the guns were loaded with whole handfuls of powder, so that it was several minutes before the clouds of smoke rolled away from the groups of dancers. The continual noise and dust tired me far more than the longest day's march I had ever undertaken.

On the following day the Kenoosian convoked an assembly of the newly-subjugated chiefs of the Madi, and in a long speech impressed upon them their obligations. I was a witness of the characteristic scene, and as the interpreter freely translated sentence by sentence to the negroes, I did not lose a word of Mohammed's oration. With terrible threats and imprecations he began by depicting in the blackest colours the frightful punishments that awaited them if they should disobey his orders, while at the same time he plumed himself upon his magnanimity.

"Look you!" he said; "I don't want your wives and children, nor do I intend to take your corn, but you must attend to the transport of my provisions; and I insist that there shall be no delay, or else the people in the Seriba will starve. You, Kuraggera, must go to your villages, and gather together old and young, men and women: get all the boys who can carry anything, and all the girls who bring water from the brook, and you must order them one and all to be here early to-morrow; every one of them will have to convey the corn to Deraggo; the bales are of all sizes, and each may carry in proportion to his strength. But mark you this: if one of the bearers runs away, or if he throws down his load, I will tear out your eyes; or if a package is stolen, I will have your head." And here Mohammed lifted a huge weapon like the sword of an ancient German knight,

and brandished it rapidly over the head of the Madi chieftain. Then turning to another, he proceeded: "And I have something to say to you, Kaffulukkoo; I know that Poncet's people have been here lately, and have carried off two elephants; now how did they contrive to find them? Bribed you were, bribed so that you sent messengers to inform them where the elephants might be found. And you, Goggo, why do you permit such proceedings in your district? Now listen: if Poncet's people come back, you must shoot them; this must not happen again, or you shall pay for it with your life; and if any one of you takes ivory to a strange Seriba, I will have him burnt alive. Now, I think you understand pretty well what you ought to do. But I have something else to say, just to caution you in case you may have any intention of injuring my people. Perhaps, as a Turk may be walking alone, the negroes may creep into the grass, and shoot him with their arrows: what of that? Rats may bury themselves in the ground, and frogs and crabs may hide in their holes, but there is a way, you know, to find them out; snakes may creep about in the straw, but to that we can set fire. Or, perhaps, you will try to burn the steppes over our heads: never mind, I can light a fire too, and you shall pay dearly for your treachery. Do as you did before, and run away to the caves at Deraggo, and I will shoot you there with shitata (cayenne pepper) from my elephant rifle, and you will soon be glad enough, half choked and stupefied, to come out again and beg for mercy. Or, supposing the negroes try and poison the shallow khor, and any Turks drink that water and die—don't be expecting to fly away like birds, or to escape my vengeance!" And much more there was in the same strain.

I had sent my cattle from Ngahma direct to Sabby, and, after laying in a sufficient stock of provisions, I prepared to return as soon as I could to my head-quarters, in order to have time to complete the necessary arrangements for the

campaign in the Niam-niam countries. Before leaving Kurragera, I witnessed another amusing scene in Aboo Sammat's endeavours to make the chiefs understand the number of bearers he required. Like most other people of Africa, the Madi can only count up to ten, everything above that number having to be denominated by gestures. At last some bundles of reeds were tied together in tens, and then the negro, although he could not express the number, comprehended perfectly what was required of him. Kurragera was obliged to furnish 1530 bearers, and being asked whether he understood, made an affirmative gesture, took the immense bundle of reeds under his arm, and walked off gravely to his village. We moved on through the day in company with an enormous train of 2000 bearers of both sexes and of every age. Keeping on continually in a northerly direction, after a march of eight leagues we reached the Seriba Deraggo. The Deraggo mountains were visible several leagues distant to the north, and afforded some desirable stations for verifying my route. By the side of one of the Roah tributaries, called Gooloo, which, however, we did not cross, we halted for a while, and I employed the interval in shooting guinea-fowl, ordinary poultry in this district being somewhat scarce.

For the first time since I had quitted Egypt, I spent the night in Deraggo without my bedding: the servant who had the charge of it had left it behind in Kurragera. On all my tours, I never failed in being extremely careful not to omit anything that without material expense could contribute to my health and comfort. I had learnt enough to know that the more the traveller contrives to spare himself exhaustion from fatigue, the more he will be able ultimately to perform, and the greater will be his security against the baneful influences of the climate. A perfect, or even reliable, acclimatisation is not to be thought of until after some years' experience, and any attempt to hasten it by rash exposure, or by unnecessary hardship, is quite unavailing.

I spent one day in a visit to the neighbouring mountains, which, lying about a league to the east of the Seriba, extended for about three leagues to the north-east. The loftiest and most southerly peak is called Wohba, and is about 500 feet high: it contains some remarkable caves, which I had not time to visit; they were the same referred to by Aboo Sammat when he threatened to drive out the Madi with pepper-dust, a hint which might be taken by any future general who may desire to smoke out the unhappy Bedouins from the caves of Algeria. I contented myself with mounting an eminence about 300 feet high, called Yongah. The western horizon and the mountains of Awoory were unfortunately obscured by a dense smoke from the burning of the steppe; but the little hills between Ngahma and Karo were distinctly visible. I also noticed in the W.S.W. a mountain known as Gere, which I afterwards saw again when returning from the Niam-niam countries, as I was passing along the basin of the Lehssy. The chain of Deraggo is formed of a bright-coloured gneiss. A valley broke in near the spot which I explored, and along the entrance the Madi had dug a row of pits forty feet deep for the purpose of catching elephants. Hither, from a wide circuit, they hunt the animals, which, hastily rushing into the valley, fall headlong into the trenches which have been artfully concealed.

The Seriba Deraggo was situated in the eastern part of a valley gently sloping towards the mountains. From the depth of this depression there issued an important brook, whose bed at this season contained a series of huge pools. We now again turned westwards towards the Roah, in order that I might visit Kuddoo, the last of Aboo Sammat's Seribas, which lies exactly south of Dokkuttoo, and thirty miles higher up the river. We were obliged to make a wide *détour* to avoid the mountains, and, after a stiff march for five leagues in a W.N.W. direction, we at length reached our destination.

The Roah flows close by Kuddoo in a deep basin enclosed with forest, and describes a semicircle about the Seriba. The river was now from thirty to fifty feet wide; in the rainy season it is as much as fifteen feet deep, whilst in the winter its depth rarely exceeds four or five feet. The channel of the river was here entirely overarched with verdure; in some places the lofty trees starting from the dense woods met across the water, and formed bowers of foliage, whilst the fallen stems below made natural bridges. Very feeble were the rays of light that penetrated to the surface of the water, and the long creepers trailed from the overhanging branches. The force of the current caught the pendants, and made the tree-tops bend and the leaves all rustle as though moved by the hands of spirits. Large monkeys found congenial habitation in the branches, the river vegetation offering many of the fruits on which they can subsist. At times the beauty and abundance of the blossoms surpassed anything that I had seen. Pre-eminent in splendour were the brilliant *Combreta*: the masses of bloom gleamed like torches amid the dark green of the thickets, whilst the golden sheen of the fruit intensified the marked contrast of the tints. Any attempt to give a detailed account of the beauties of Africa is entirely unavailing, and once again I refrain from wearying the reader with any further repetition of my admiration.

Leaving Kuddoo, we marched for eight leagues near the left bank of the Roah, and across the numerous little watercourses that intersect the region, and flow down to the river on the right. At Degbe we re-entered the road along which we had travelled on our outward trip, and, passing through Dokkuttoo, we did not again quit our previous route all the way to Sabby. As we approached Geegyee, the spot notorious for the rapacity of the lion, my people betrayed an anxiety still greater than upon their journey thither, for in Dokkuttoo the intelligence had reached us that some lions had been again seen on the previous day, and that several

travellers who had come across them in their march had only escaped by climbing up into the trees. This was a circumstance that painted itself upon my fancy in such entertaining details, that I could not resist the desire to see it acted out for my own amusement. Accordingly, when we had reached the densest part of the formidable forest, at a spot where the pathways were most crooked and intricate, I bellowed out in the most despairing accents I could command, the cry of "A lion! a lion!" In an instant the bearers had flung down their burdens, and my brave Nubians scampered off to the nearest tree. Nimbly as sailors up the rigging of a foundering ship, did they clamber high into the boughs. I enjoyed my laugh as I made them see what brave fellows they were.

We here saw in all directions the recent traces of numbers of elephants, which must have crossed our path in many places during the previous night. Our last bivouac was made on the banks of the Tudyee, where we feasted on the flesh of two hartebeests, brought down from among a number that had been feeding on the tender foliage of the underwood. On the last day but one of the march, I had more exertion than on any other of the twenty-four through which the excursion had lasted; without once sitting down, I passed the entire day in hunting and walking.

On the 15th of January I once more re-entered the hospitable huts of Sabby, and was welcomed by the servants I had left behind, and almost overpowered by the joyful caresses of my dogs. This tour to the east had altogether extended over 210 miles, and I had thoroughly explored the territory of a people who had hitherto been almost unknown, even by name. I will now take a retrospect of the country I had just left, and give a brief summary of my observations on its political condition.

In default of a national designation for a group of tribes speaking almost the same dialect, and whose distinctive

qualities appear mainly in their slight differences of apparel, I should prefer to follow the example of the Khartoomers, and call these people simply Mittoo; this name, however, only really belongs to the most northerly of the group, who call themselves Mittoo, or Mattoo, and there are four other tribes who consider themselves equally distinct and independent, viz., the Madi,* the Madi-Kaya, the Abbakah, and the Loobah. Their collective country lies between the rivers Roah and Rohl, and for the most part is situated between lat. 5° and 6° N. Towards the north it stretches far as the territories of the Dinka tribes of the Rohl and Agar; on the south it is bounded by the eastern extremity of the Niam-niam, where the name of Makkarakkah has already been adopted in our maps. But Makkarakkah and Kakkarakkah is a designation which the Mittoo use for the Niam-niam taken in the gross, and not the name of any single tribe. Out of their own mouth, whenever I referred to the soil upon which I was standing, I had every proof that the Mittoo call their land "Moro," a name which Petherick on his map has attributed to the entire district between lat. 4° 30′ and 6° N., which extends eastwards from the Rohl to the Ayi.

All the Mittoo tribes are able to converse with each other, as their languages present only such minor differences of dialect as might be supposed would arise from their independent political position; the Niam-niam, on the other hand, with just the same plurality of tribes, preserve a uniformity of language which admits of scarcely any variety. The Mittoo dialects in some of their sounds resemble that of the Bongo, but taken as a whole, like all the distinctive languages of the larger nations of the Gazelle, the Mittoo and the Bongo have very little in common. As far as regards

* These Madi, whose name is of frequent occurrence in Africa, have no connexion with the Madi of the upper part of the Bahr-el-Gebel.

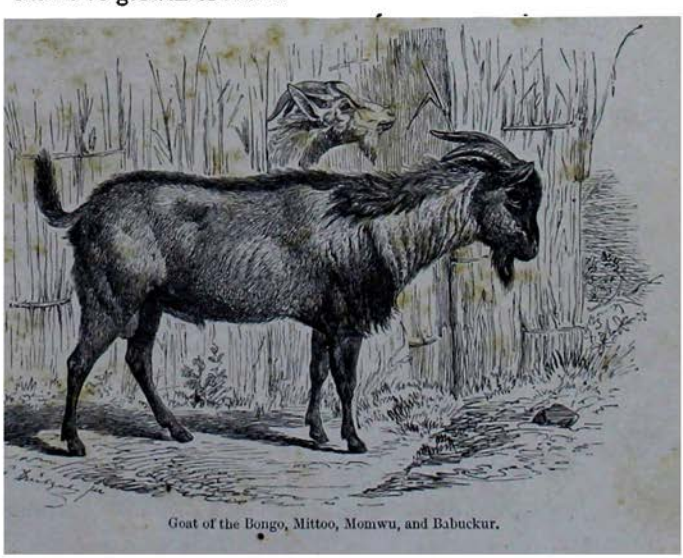
customs, dress, and household appliances, it must be admitted that the Mittoo tribes most nearly resemble the Bongo, and it almost might seem as if, in the history of their development, they formed a transition between them and the Niam-niam.

The subjection of the Mittoo to the Khartoomers must not be dated earlier than the year preceding my visit. Although the country in a limited sense had to a certain extent been partitioned amongst the arbitrary and advancing companies of the Upper Nile, and notwithstanding that its inhabitants had been in places reduced to a condition of vassalage similar to that under which the Dyoor and Bongo had been smarting for the last ten years, yet the entire subjugation of the southern tribes, the Loobah and Abbakah in particular, might still be described as incomplete. The Abbakah hitherto have been only occasionally subject to the incursions of slave-catchers and corn-stealers, and therefore they have neither the advantages nor the disadvantages, whatever they may be, of actual vassals.

In the scale of humanity all the Mittoo tribes are decidedly inferior to the Bongo: they are distinguished from them by a darker complexion, and by a bodily frame less adapted to sustain exertion or fatigue. During my visit to the Niam-niam countries, I had many opportunities of seeing large bodies of bearers of both races, side by side, and was then able to institute comparisons between the two. The Bongo vied with each other in their powers of endurance, and would subsist for a length of time upon mere roots without any perceptible change in their appearance, whilst the Mittoo under the same ordeal would waste almost to skeletons, and in a very short time would abandon all attempt at work. Even in their own homes I hardly ever saw them with the strongly-built frames of the sturdy Bongo. Nearly all the Mittoo who were employed as bearers were afflicted with the guinea-worm. An undesirable prerogative is this

that the race have gained, that they should nurture such a thorn in the flesh; for the guinea-worm is far from universal, and makes selections as to what diversities of human nature it shall choose to patronise.

I failed to obtain any satisfactory explanation of this debility of the Mittoo; their land is very productive, they are diligent agriculturists, and they cultivate many a variety of cereals and tuberous plants, as well as of oily and leguminous fruits. On account of its fertility the land requires but little labour in its culture, and throughout its extent displays a productiveness which is only found for any continuance at rare intervals in the other countries that I visited. It is especially noticeable between lat. 5° and 5° 30′ N., in the districts on the upper Roah and Wohko, which are liberal stores for the sterile Nubian settlements on either hand. The district of the Mbomo, which is adjacent to that of the Nganye of the Niam-niam, between the rivers Lehssy and Roah, is also pre-eminent among its neighbours for its extensive growth of maize.



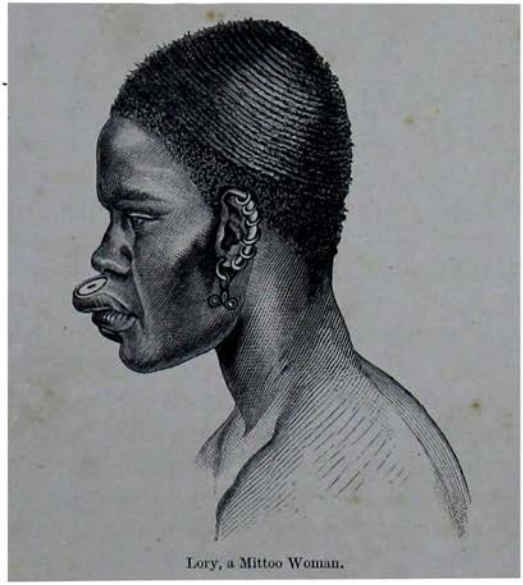
Goat of the Bongo, Mittoo, Momwu, and Babuckur.

The Mittoo breed the same domestic animals as the Bongo, viz., goats, dogs, and poultry; they possess no cattle, and are on that account ranked by the Dinka under the contemptuous designation of "Dyoor," which is intended to be synonymous with savages. They estimate the dog, however, in a very different way from the Bongo, and by their fondness for its flesh show that they are not many grades above the cannibal. Bernardin de S. Pierre, in his 'Études de la Nature,' gives it as his opinion that to eat dog's flesh is the first step towards cannibalism; and certainly, when I enumerate to myself the peoples whom I visited who actually, more or less, devoured human flesh, and find that among them dogs were invariably considered a delicacy, I cannot but believe that there is some truth in the hypothesis.

The whole group of the Mittoo exhibits peculiarities by which it may be distinguished from its neighbours. The external adornment of the body, the costume, the ornaments, the mutilations which individuals undergo—in short, the general fashions—have all a distinctive character of their own. The most remarkable of their habits is the revolting, because unnatural, manner in which the women pierce and distort their lips; they seem to vie with each other in their mutilations, and their vanity in this respect I believe surpasses anything that may be found throughout Africa. Not satisfied with piercing the lower lip, they drag out the upper lip as well for the sake of symmetry.* To the observations I have made before about all African tribes that in their attire they endeavour to imitate some part of the animal creation, I may add that they seem to show a special preference for copying any individual species for which they have a particular reverence. In this way it frequently happens that their superstition indirectly influences the habits of their daily life, and that their animal-worship finds expression in their

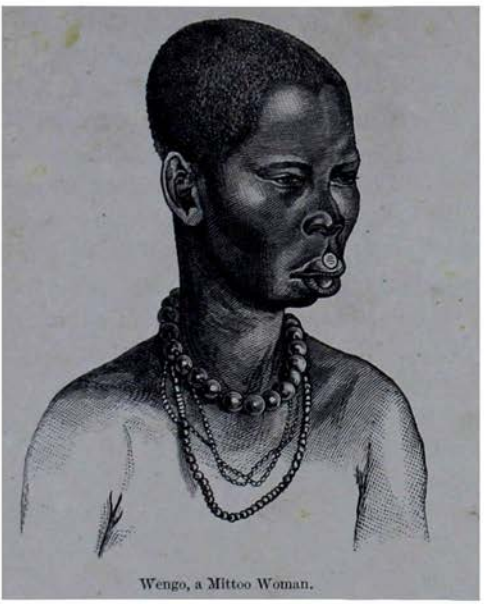
* The mutilation of both lips was also observed by Rohlfs among the women of Kadje, in Segseg, between Lake Tsad and the Benwe.

dress. It is, however, difficult to find anything in nature collateral with the adornment of the Mittoo women; and it surpasses all effort to understand what ideal they can have in their imagination when they extend their lips into broad bills. If our supposition be correct, the Mittoo fashion perhaps only indicates a partiality for the spoonbills and the shovellers with which these ladies may have some spiritual affinity. The projections of the iron-clad lips are of service to give effect to an outbreak of anger, for by means of them the women can snap like an owl or a stork, or almost as well as the *Balæniceps Rex.*



Lory, a Mittoo Woman.

Circular plates nearly as large as a crown piece, made variously of quartz, of ivory, or of horn, are inserted into the lips that have been stretched by the growth of years, and these often rest in a position that is all but horizontal; and when the women want to drink they have to elevate the upper

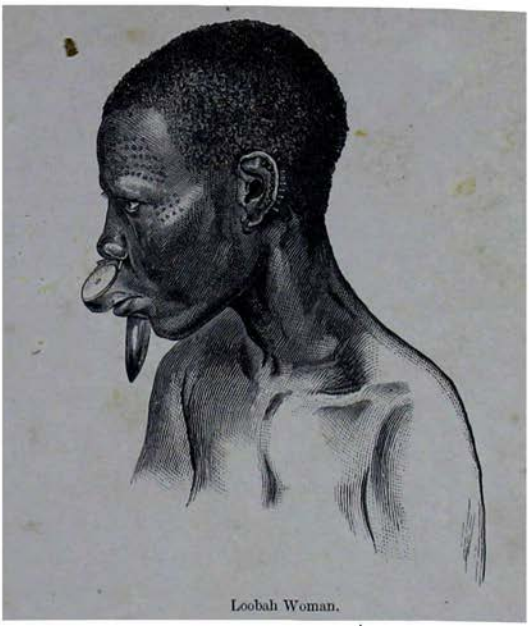


Wengo, a Mittoo Woman.

lip with their fingers, and to pour the draught into their mouths.

Similar in shape is the decoration which is worn by the women of Maganya; but though it is round, it is a ring and not a flat plate; it is called a "pelele," and has no other object than to expand the upper lip. Some of the Mittoo women, especially the Loobah, not content with the circle or the ring, force a cone of polished quartz through the lips as though they had borrowed an idea from the rhinoceros. This fashion of using quartz belemnites of more than two inches long is in some instances adopted by the men.

The women of the Madi correspond in their outward garb with the Mittoo in general; they make use of a short garment of mixed leaves and grass like the Bongo. The men adopt the same kind of skin covering for their loins as the Bongo, but they have one decoration which seems peculiar



Loobah Woman.

to themselves; they wear in front something after the style of the "rahad" of the Soudan or the "isimene" of the Kaffirs—a short appendage made of straps of leather, ornamented by rings and scraps of iron; but it is so narrow that it has almost the look of a cat-o'-nine-tails. There are others who buckle on to their loins a triangular skin which has every variety of rings and iron knick-knacks fastened round its edge.

Cone of quartz worn in the lip (actual size).

Occasionally there were to be seen some broad girdles covered with a profusion of cowries, such as the Niam-niam were said to wear; but hitherto the Madi were the only people I had met with who retained any value for cowries, which for some time had ceased to be held in

much repute in the Gazelle district. The mode of wearing these conchylia was to split off their convex backs and to fasten them on so as to display only the white orifices.

Apron worn by the Madi.

Like the northern Bongo the Mittoo disdain devoting their attention to the decoration of their hair: men and women alike wear it quite short. The portrait of Goggo has already furnished a representation of one of their elaborate perukes.

The plucking out of the eyelashes and the eyebrows is quite an ordinary proceeding among the women. The men have coverings for their head the same as the Niam-niam. The accompanying portrait of Ngahma shows such an article of headgear, suggesting the comparison either of a Russian coachman's hat, or of the cap of a mandarin. They are very fond likewise of fixing a number of iron spikes to a plate which they fasten behind the head, and to these they attach strings of beads and tufts of hair. The Madi make also a sort of cap rather prettily ornamented with coloured beads and which fits the head tight like a skull-cap.

It is only among the men that tattooing is practised on a large scale, the lines usually radiating from the belly in the direction of the shoulders like the buttons on certain uniforms; the women merely have a couple of parallel rows of dotted lines upon the forehead. The variety is very great of the ornaments which they construct out of iron and copper, consisting of bells, drops, small axes and anchors, diminutive rings, and platters, and trinkets of every sort. All the women wear a host of rings in their ears.

These tribes have the same liking for iron chains as the Niam-niam and the Monbuttoo. Whatever they attach to their bodies they attach by chains; and they are very inven-

tive in their designs for armlets and rings for the ankles. The armlets very often have a projecting rim, which is pro-

Ngahma, a Mittoo Chief.

vided with a number of spikes or teeth, which apparently have no other object than to make a single combat as effective as possible.

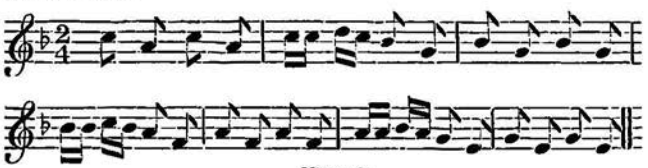
Even amongst these uncultured children of nature, human pride crops up amongst the fetters of fashion, which indeed are fetters in the worst sense of the word; for fashion in the distant wilds of Africa tortures and harasses poor humanity as much as in the great prison of civilisation. As a mark of their wealth, and for the purpose of asserting their station in life, both sexes of the Mittoo wear chains of iron as thick as their fingers, and of these very often four at a time are to be

noticed on the neck of the same individual. Necklaces of leather are not unfrequently worn strong enough to bind a lion; these impart to the head that rigidity of attitude given by the high cravats at which we wonder so much when we look at the portraits of a past generation. When the magnates of the people, arrayed in this massive style, and reeking with oily fat, swagger about with sovereign contempt amongst their fellow mortals, they are only as grand as the slimy diplomatists, solemn and stiff, who strut along without vouchsafing to unlock one secret from their wary lips. These necklaces are fixtures; they are fastened so permanently in their place that only death, decay, or decapitation can remove them. I was never fortunate enough to see the mysterious operation by which these circles were welded on, but I know that when the rings are soldered to the arms and ankles, fillets of wood are inserted below the metal to protect the flesh from injury.

Amongst the many particulars in which the Mittoo are inferior to the Bongo, it may be noticed that their huts are not only smaller, but that they are very indifferently built. Many of them could be covered by a crinoline of lavish proportions. In their musical instruments, however, and in their capabilities for instrumental performances, they are far superior to any of their neighbours. Instead of the great "manyinyee," or wooden trumpet of the Bongo, they make use of long gourd flasks with holes in the side. They have also a stringed instrument which may be described as something between a lyre and a mandolin; five strings are stretched across a bridge which is formed from the large shell of the Anodont mussel; the sounding board is quadrangular, covered with skin, with a circular sound-hole at each corner. The instrument altogether is extremely like the "robaba" of the Nubians, and constitutes one of many evidences which might be adduced that the present inhabitants of the Nile Valley have some real affinity with the tribes of

the most central parts of Africa. The flute is made quite on the European principle, and is most expertly handled by the Madi, who bestow much attention on mastering particular pieces. Small signal-horns made with three apertures are in general use amongst the tribes of the district; but the slim trumpet called "dongorah" is peculiar to the Mittoo; it is about eighteen inches long, and resembles the "mburah" of the Bongo. Music is in high estimation amongst the tribes which compose this group, and it may be said of them that they alone have any genuine appreciation of melody, negro music in general being mere recitative and alliteration. I once heard a chorus of a hundred Mittoo singing together; there were men and women, old and young, and they kept admirable time, succeeding in gradual cadence to procure some very effective variations of a well-sustained air.

Mittoo Lyre.



Mittoo air.

The implements in general differed very little from the industrial contrivances of the Bongo. Their iron-work is rougher and clumsier; but they take a great deal of pains in forming their arrow-tips, having scores of devices for shaping the barbs. One of their ordinary utensils is a crescent-cut ladle with a long handle for stirring their soup.

Graves, for the most part are seen like those of the Bongo; they consist of a heap of stones supported by stakes, on which is placed the flask from which the deceased was accustomed to drink; both Mittoo and Bongo too, as might be

conjectured, have the same method of disposing of their dead, and erect the carved wood penates which have been already mentioned.

The use of the bow and arrow gives the Mittoo a certain warlike superiority over the Dinka, and among their neighbours they are considered to surpass the Bongo in their dexterity in archery. Their bows are four feet long, and of an ordinary form. Like the Monbuttoo, who have shorter bows, they use wooden arrows which are about three feet in length. The heads of these arrows reach to the middle of the length. The Mittoo despise the cumbrous protection of a shield, but they are careful to keep a liberal supply of spears.

CHAPTER X.

Preparations for Niam-niam campaign. Generosity of Aboo Sammat. Organisation of the caravan. Ceremonies at starting. Banner of Islam. Travelling costume. Terminalia forest. Hartebeest chase. Ahmed the Liar. Prospect from Mbala Ngeea. Bivouac on the Lehssy. Camp noises at night. Story of cannibalism. Ahmed's fate. The Ibba. First meeting with Niam-niam. Growth of the popukky-grass. Elephant-hunting among the Niam-niam. Surprise at the white man. Visit to Nganye. A chieftain's household. Entertainment by Nganye. Gumba. Colocasia. A Niam-niam minstrel. Beauty of the Zawa-trees. Encephalartus on the hill of Gumango. Cultivated districts on the Rye. Condition of hamlets and farms. Devastation of Bendo's district. Contest with the soldiers. Escape from a bullet. Identity of the Sway and the Dyoor. The law of drainage. Passage of the Manzilly. First primeval forest. Frontier wildernesses. Organisation in the geography of plants. Importance of guinea-fowl to the traveller. Feeding the bearers. National diet.

THREE months had thus elapsed in almost uninterrupted wanderings, but I found on my return to Sabby that I could spare only a short reprieve for recruiting. Previous to starting on the laborious expedition to the Niam-niam, to which under the guidance of my protector I had pledged myself, there remained only a fortnight. A score of packages had to be fastened up, many a trunk had to be arranged, clothes had to be provided, implements of many sorts to be secured, ammunition and arms to be put in readiness for the projected excursion into a hostile territory, where we proposed to pursue our way for six months to come. In addition to this provision for the future, I had to make good the arrears in my diary, to get through all my correspondence for the current year, and to provide for the remittance of my valuables to distant Europe. All this had to be accomplished in the space of fourteen days.

Nor could domestic demands afford to be overlooked. My household required a vigilant supervision. The mere labour of washing our clothes was considerable, although the accumulation of two months' wear was by no means extensive. In order to perform the laundry work, it was necessary to send to the river, a league and a half distant, where the things could be rinsed out, dried, and bleached. On the evening before our departure for what we called "the world's end," my four-legged body-guard was suddenly enlarged by eight charming little pups of the splendid Shillook breed. Of my Nubian servants, Hussein was the oldest and the most experienced, and to him I entrusted the responsibility of conveying in safety the newly-born animals, together with my correspondence and all my collections, back to Ghattas's Seriba in Dyoor-land, which I still deemed my head-quarters. The worthy fellow thus had the advantage of exchanging the prospect of a roving life among the Niam-niam for the friendly life of the Seriba, where, in the society of his countrymen, he might pass his time in playing upon the robaba, in mastering the intricacies of the game of mungala, or, while the gourd-shells of merissa went merrily round, in joining in the chorus, rendered with a fine nasal twang, of "Derderoah, derderoah el yum, derderoah, derdereh, ginyatohm."

By the 29th of January, 1870, every preparation had been so far advanced that the bulk of the caravan was set in motion. Mohammed Aboo Sammat himself proposed to join the party in about a fortnight, as he was compelled to go into the Mittoo district to secure some additional bearers. My own retinue consisted of four Nubian servants, and three negroes who were engaged as interpreters, one of them being a Bongo, the other two genuine Niam-niam; besides these, there was a number of Bongo bearers, which at first was about thirty, but in the course of our progress was increased to forty. The whole of these were supplied to me at the sole expense of Mohammed, whose hospitality I had now

been receiving for three months, and continued to enjoy to the end of our excursion; not only throughout the period of eight months did he entertain me and all my party whilst we were in his settlements, but he entered most readily into all my wishes, and whenever I desired to explore any outlying parts he would always lend me the protection of a portion of his armed force.

Never before had any European traveller in Central Africa such advantageous conditions for pursuing his investigations; never hitherto in the heart of an unknown land had there been anything like the same number of bearers at his disposal, and that, too, in a region where the sole means of transport is on the heads of the natives. All the museums —particularly those which are appropriated to botany— which have been enriched in any way by my journeyings are indebted to Aboo Sammat for not a few of their novelties. Solely because I was supported by him did I succeed in pushing my way to the Upper Shary, more than 800 miles from Khartoom, thus opening fresh districts to geographical knowledge and establishing the existence of some enigmatical people.

Everything, moreover, that Mohammed did was suggested by his own free-will. No compulsion of government was put upon him, no inducements on my part were held out, and, what is more, no thought of compensation for his outlay on myself or my party ever entered his mind. The purest benevolence manifestly prompted him—the high virtue of hospitality in its noblest sense. Whoever is actuated by the spirit of adventure to penetrate into the heart of Africa, so as to make good his footing amongst four different peoples, is undoubtedly a man of energy; although he may not be spurred on by any scientific purpose, and may simply be gratifying a desire to visit lands that are strange and to enjoy sights that are rare, yet he must have succeeded in vanquishing the thoughts which suggest that there is no

place like home, and which represent it as the merest folly to sacrifice domestic ease for the fatigues, troubles, and privations which are inseparable from the life of a wanderer.

Our caravan was joined on its way by a company of Ghattas's from Dangadduloo, conducted by a stout Dinka, whose acquaintance I had already made at the Seriba where he resided. His party consisted of 500 bearers and 120 soldiers, and they contemplated, in conjunction with a part of Aboo Sammat's people, undertaking an expedition into the ivory district of Keefa. That district was shut out from Ghattas's by the fact of the road towards it being the property of Aboo Sammat: according to a convention entered into by the Nubians, a caravan of one company was not to traverse a region appropriated by another, unless an alliance for that purpose was made between the two. As the result of this compact, it had come to pass that no less than fifteen different roads, corresponding to the same number of different merchant houses in Khartoom, branched out towards the south and west from the localities of the Seribas into the remotest lands of the Niam-niam.

Wherever two of these roadways intersect, a serious collision between the parties concerned is almost certain to ensue. Any conductor of an expedition is sure to endeavour to get the monopoly of all the ivory into his own hands. The various native chieftains are prohibited from disposing of their produce to any other agent than himself—a demand which is enforced by violence—and rival companies are intimidated by threats of action for trespass; in fact, no pains are spared to assert a right as vigorously as possible.

An agreement had now been made according to which the leader of Ghattas's caravan was to accompany Aboo Sammat's expedition as far as his establishments in the Niam-niam lands, and afterwards was to be allowed the protection of a military detachment to proceed towards the west, Aboo Sammat himself having resolved to carry on his own main

body in the direction of the south. The bearers of the Ghattas party from the east were all Mittóo, a tribe that is of much weaker frame and less capable of sustaining fatigue than the Bongo, so that by the time that they had reached Sabby, although it was only about four days' march, they had already a considerable number of invalids. Aboo Sammat's intention this year was to make his first experiment with the Mittoo from the territories he had recently gained, and to try to employ them as bearers in this enterprise among the Niam-niam. To be a bearer is a service which demands a kind of apprenticeship, and no one without practice is fitted for the continual strain and endurance which it requires. The representations, moreover, which had been made to these inexperienced Mittoo, both about the nature of the country they would have to traverse and the cannibal propensities of the people with whom they would be brought in contact, acted so powerfully upon them that it was only under compulsion that they could be made to enter upon the service at all. While, therefore, the Bongo bearers were to be relied upon, and looked forward blithely to any fatigues that might be before them, the Mittoo had to be scrupulously watched, and by night to be carefully secured within the bounds of the palisade to prevent their effecting an escape. On the very evening before we started from Sabby a number of them ventured upon a combination to revolt, and, in fact, got free into the open country. By the assistance of the Bongo they were captured after an hour's hard chase, brought back into the Seriba, placed under closer guardianship, and for a punishment were made to wear all night the yoke of the "shaba," which is ordinarily placed on the necks of slaves.

Swelling the numbers of our caravans there was a whole troop of women and female slaves, and a crowd of negro lads who followed the soldiers to carry their equipments. There was in addition a large herd of cattle which the Ghattas

party had plundered from the Dinka, and which they drove with them to maintain themselves when they came to enter upon the desolation of the desert. Aboo Sammat, never rich in cattle, because he did not, in the same way as his neighbours, indulge in plundering the Dinka, had certainly made no superfluous provision for the needs of his people; but for myself there was an abundant supply of calves, sheep, and goats still remaining from the liberal presents that had been made me in Mvolo during my excursion to the Rohl. Whenever an animal was killed, I invariably shared the meat with the Nubians, and they were always ready to return the favour as often as they slaughtered any of their own. My people's necessities were thus supplied, whilst personally I was continually provided by Aboo Sammat with the choicest morsels as long as there was any choice to be made. But where property fails, even Cæsar must forego his rights; and days of scarcity did arrive, when for my servants there was nothing, and for myself there was next to nothing, to be had.

It will readily be imagined that for a colony of nearly 800 people a start in single file was not effected in a moment: it was quite midday before I commenced any movement at all. Several days had to elapse, and no little patience had to be tried, before things fell into anything like regularity. Of all men in the world, perhaps the Nubians are the most disorderly. Method is altogether alien to their nature; they loathe it after the unshackled freedom they are accustomed to indulge; they have no idea of any advantages arising from mutual co-operation, and accordingly they look upon any approach to order only as a token of individual bondage.

Amongst a body of men actuated by such sentiments, any thought of discipline, according to our ideas, is entirely out of the question. Only that master can at all hope to succeed in exercising any authority who understands how to get

upon the weak side of their character. By this means he may perchance attain what he wants in a way which a Turk, even by the extremest severity, could never accomplish. He may prevail, for instance, by slipping in at the right time an allusion to brotherhood, or by an appeal to honour and to the value of one's word; or he may invoke the religious sentiment by reminding the Nubian of his being a Mohammedan, "Thou art a Moslem;" or again, by holding out a bribe, such as a fresh slave or a good payment, he may reduce a cantankerous spirit to subjection; but whatever is done has to be effected craftily and with a good deal of insinuation and gentle coaxing. No one understood all these artifices better than Aboo Sammat, who was utterly regardless of all consequences and could behave like a perfect tyrant as soon as ever he had established a control. On account of my own position amongst the Nubians I had to renounce most of these little artifices, but, nevertheless, I had my own special resources. A piece of wit, brought to bear at the right place and at the right time, very seldom failed to be of essential service. Although a capacity for appreciating wit must in a way be considered local and limited in its compass, yet it hardly admits of dispute that there is no nation of the world entirely without its sense of humour. The botanist Fortune, who made his laborious investigations in China, has left it upon record that he only succeeded by mother-wit in gaining access to a people which had previously resisted every effort towards the least familiar intercourse with them. A faculty of bantering a little may be of considerable service to assist the progress of a traveller; and I may, perhaps, be allowed to relate what follows as an instance of the mode in which I attempted to proceed, and the example, perchance, may give a trifling hint to those who may be disposed to follow in my wake.

I will assume that there was going to be some contention or other between me and my people, as, for instance, that I

had determined to go to some particular mountain, and they held it as utterly useless to go and camp in a desert while they had the chance of staying and enjoying their merissa among their friends. Very rarely in Egypt do people exchange a few words with one another without introducing the term "ya Sheikh" as a mode of allocution. Even a father talking to his son of a few years old will address him as "ya Sheikh." In Nubia the habit is not quite so general, but is common enough to be familiar and to be entirely understood. Now, one of my people had once taken umbrage at the word being addressed to him, and in ill-tempered *pique* he had repudiated the term, saying "Don't sheikh me; I am no sheikh." I thought to myself that he should hear of this again; and hear of it again he did.

Some weeks elapsed, and by chance an occasion arose when we were discussing about a certain mountain, whether it were too far off or too high for us to ascend. One of my party was arguing and trying to satisfy the other, who was our cantankerous friend of old, and happened to begin one of his appeals to him by saying "ya Sheikh." This was my chance; so I cried out, "O don't sheikh him. Twice he has himself told me that he is no sheikh; he is a lout. If he were a sheikh, he would go with us to the mountain; but, because he is a lout, he likes to stay behind and sip his beer." A general laugh of applause followed my little sally, and the joke was hailed with a round of derision against the captious booby. This trifling circumstance, perhaps, may illustrate the mode of dealing which appeared to answer best, and I hope needs no excuse for the length at which it is related.

Delay upon delay prevented our making a start, and Nubian-like we consumed the day in getting ready. When the caravan did issue from the Seriba, it proceeded, according to the usage of the country, under the conduct of a banner carried ahead. The armed force was portioned out

in three divisions, each of which had its own flag. Aboo Sammat's banner was like the Turks'; it had the crescent and the star upon a red ground: Ghattas, although he was a Christian, displayed the same symbol of Islam, only red upon a white ground. At the start, two captains, Ahmed and Badry, were put in charge. Of these I had already made the acquaintance of the latter, during my excursion to the Rohl. Aboo Sammat himself, as I have mentioned, had arranged, with the third corps, to join the caravan somewhat later.

At the outset of any expedition, whether it be a movement to the river, a raid upon the cattle of the Dinka, or an excursion to the Niam-niam, it is deemed an indispensable preliminary that a sheep should be offered in sacrifice at the entrance of the Seriba. When this has been accomplished, the procession is prepared to start, and the standard-bearer lowers his flag over the victim, so that the border of it may just touch the blood, and afterwards there is the usual muttering of prayers. In truth, the banner of Islam is a banner of blood. Bloodthirsty are the verses which are inscribed upon its white texture; a very garland of cruel fanaticism and stern intolerance is woven in the sentences from the Koran which, in the name of the merciful God, declare war against all who deny the faith that there is one God and that Mohammed is his prophet, and which assert that his enemies shall perish from the face of the earth.

The sun was already in the zenith when we found our way to the arid steppes; the heat was scorching, but I enjoyed having my dogs about me, barking for joy at their liberation from the confinement of the Seriba. Very memorable to me is still that day on which I took this first decisive step towards the attainment of my cherished hopes. I thought of that moonlight night as I left Khartoom, when upon the glassy mirror of the White Nile I had kept my vigil of excited interest, and now here I was making a still more

decisive movement and entering upon a still more important section of my enterprise. Now, there was nothing to obstruct me from penetrating to the heart of Africa far as my feet could carry me; now, as Mohammed said, I could advance to the "world's end," and he would convey me on till even I should acknowledge that we had gone far enough. But unfortunately my vision of hope was doomed to be dispelled. Just at the moment when curiosity was strained to its highest expectation, at the very time when scientific ardour was kindled to go on into the very depths of the mysterious interior, we were compelled to return. Had we only been enabled to prosecute our journey as far again towards the south, I do not entertain a doubt but that I should have been in a condition to solve the problem of the sources of those three great rivers of the west, the Benwe, the Ogowai, and the Congo.

Upon the first day's march we only proceeded a few miles and camped out beside the little stream Tudyee, of which the deeply-hollowed bed was divided into two separate arms. In one of these arms a languid current was passing on, but in the other, which was perfectly dry, I took my repose for the remainder of the day, under the shade of a grateful shrubbery which overhung its recesses. The revelry of a camp life was not wanting; meat in abundance was boiled, roasted, and broiled, and the festivity extended far into the night. As is ever the case on the first encampment, the proximity to the settlements with their ample provisions enables it to assume the aspect of a picnic.

The most valuable portion of my luggage was conveyed in twelve small portmanteaus, carefully covered with hides: the remnant was carried in chests and baskets. The rolls of paper were wrapped in sheets of calico, which I had well soaked in fresh caoutchouc. I continued to experience the great comfort of having my baggage conveyed by hand, so that I had access at any stage of our progress to whatever I

required. It was hardly necessary to keep anything under lock and key, for nothing could be stolen that would not at once betray the thief. Everything was therefore open, and consequently very little time comparatively was lost in preparing for the daily start. There was only one thing to be guarded against, and that was the propensity of the bearers to turn the packages upside down. It was necessary in this particular to be always jogging the memory of the Bongo, who would reply "mawah," (I hear) and so everything would go safely along, over sloughs and brooks and marshes, and across the steppes reeking with dew, wherever the leader might desire.

Anxious to reach the village of the Bongo sheikh Ngoly, we made a prolonged march on the next day. Proceeding through the most southerly of the districts occupied by the Bongo, we kept still in the region that belonged to Aboo Sammat. An hour or more before sunrise, as is usual with these caravans, a general *réveil* was sounded by drums and trumpets, and a meal was made on the remains of the previous night's feast, as no halt was to be allowed for breakfast. A collection of plants, however, has to be carefully handled, and while my people were strapping up the packages, and the bearers and soldiers were forming their line, I found a quiet half-hour to prepare myself a cup of tea, and to arrange all my little matters for travelling. For the European traveller no article of apparel is better adapted than an old-fashioned waistcoat, with as many pockets as possible, into which a watch, a compass, a note-book, a tinder-box with some matches, and other articles of continual use may be stowed. A coat of any sort, however light, becomes a burden upon a walking expedition; about the arms it always uncomfortably obstructs the perspiration. A strong felt hat with a broad brim is the best protection for the head; it is preferable to the Turkish cap, but on account of the intense power of the rays of the sun it cannot be worn

immediately next the head. It cannot have anything below it better than the red fez, which never requires to be taken off; when rest is taken under the shade of some spreading tree, it is quite sufficient to remove merely the felt hat.

The march was through a pleasant park-like country, and after crossing a considerable number of fordable rivulets, we arrived about midday at the huts of Ngoly. At Ngoly, over a surface of about eight square miles, we found various groves of the *Terminalia macroptera*, having very much the look of a wood of European oaks. In these regions any continuance of a single species of tree or plant is very rare, and the bush-forests are generally remarkable for the great diversity of species which is found on a limited area. The Terminalia is to be classed amongst that small number of trees of which regular groves, in what we call forests, rise to the view. It grows, as may readily be observed, upon the gentle depressions of a soil sufficiently rich, but which is yet too dry for the formation of the tall grass of the steppes, being watered only by currents which are formed during the rains, and of which we crossed the remnants during the dry months of winter. Between lat. 5° and 3° N., in the longitude under which we were travelling, the equatorial zone of the continual rainfall decidedly suffers an interruption, and the zenith altitudes of the sun cannot be said to bear a due proportion to the largest annual fall of rain.

The forests of the Terminalia are remarkable for the general deficiency of undergrowth or bushwood which they exhibit, a circumstance that arises from the general inability of woody plants to endure so moist a soil. The large proportion of the trees and shrubs of the country thrive much better in the rocky regions of the ironstone, and if ever a grove establishes itself where the ground is wet, it soon gets as clear of undergrowth as though all had been taken away by the hand of man, and ere long it assumes quite a northern aspect.

The landscape in Africa presents to a large extent examples of trees which only cast off their foliage fitfully. In contrast to these, the Terminalia annually throws off all its leaves as soon as the rains are over, and throughout our winter months it is perfectly bare. It grows to a height of about thirty or forty feet, and by its deeply-scored black bark and the general character of its ramifications, it may be said to be not unlike the glutinous alder of the north.

I passed the afternoon in a charming wood chasing the hartebeests (*Antilope caama*) which were abundant everywhere over this attractive hunting-ground. Their leather-coloured coats stood out in glaring contrast to the dark tree-stems; but the lack of underwood left our extensive encampment so thoroughly exposed, that the animals took alarm betimes, and were difficult to reach. Accordingly after an hour's fatigue, I had to content myself (as would happen again and again) with a number of guinea-fowl, which were a never-failing and never-palling contribution to our *cuisine*. On all my hunting excursions I invariably found myself accompanied by a regular troop of people who made the chase a matter of great difficulty, but who nevertheless considered their services indispensable. My own three negroes carried the portfolios for the plants, and my rifles; but from the bearers there was always a swarm of volunteers who came to act as pointers, prompted to their extra exertions, partly from a desire to get the lion's share of what might fall, and partly from that irrepressible love of hunting which seemed indigenous to their very nature.

As a matter of botanical interest I observed the frequency with which the wild *Phœnix* occurs in the low district all around Ngoly. Most probably this is the parent-stock of the date-palm; the time in which its fruit is here ripe is the month of July.

Up betimes on the morning of our third day's march, I took my place at the front of our caravan, close behind the

standard-bearer, in the hope of getting near enough to secure a shot at some hartebeest that might be taken by surprise. In the woods the animals could be seen in numbers as great as on the previous evening; they skulked behind the black stems of the trees, keeping a vigilant look-out, but as soon as anyone attempted to leave the procession and approach them, off they were with a bound, and scampering away in a zigzag career, regained the wilderness.

For a full hour the way proceeded through the wood, and then we entered a low-lying steppe which brought us to the running water of the little river Teh or Tee. As we approached we saw a herd of buffaloes betake themselves to flight, and, snorting and brandishing their tails, dash into the stream; these brutes, however, are here as elsewhere quite easily surprised by an adept. Flowing rather rapidly, the Teh is between twenty and thirty feet in breadth, and passes along wooded banks which gave me my first introduction to the flora of the Niam-niam. The botanical treasures of this district, I may venture perhaps to call the "bank or gallery flora," in contradistinction to that extensive class of vegetation which predominates over the wide steppes around. Large *Scitamineæ* contribute an essential feature, and there is an Oncoba which bears upon its leafless wood blossoms that are conspicuous for their numerous stamens. This Oncoba is here found in its most northerly abode, but its growth is wide-spread as far as Benguela.

Unfortunately there was little leisure for me to enjoy this attractive *entrée* to the flora of the land. We had to hurry on, and passed quickly into a region where the tall unburnt grass made the route indistinguishable to all but an expert, and where it was impossible to see more than a few paces in advance.

By perseverance we reached a bare and extensive rocky plain developing itself into the depression of a valley along which the stream of the Mongolongboh cuts its winding

path. The rock is all composed of red ironstone, very frequently of that coarse and large-grained quality which is technically known as roe-stone. These flats of red rock are common all through the districts south of the great alluvial territory of the Dinka which is watered by the Gazelle and its various tributaries. They are often, for leagues together, level as the surface of a table, scarcely ever revealing a rift, and very rarely worn away into hollows. When, however, any of these depressions are found, they are always sure to be full of most interesting specimens of a periodic vegetation.

Our next halting-place was close by the water-side under the shade of some noble trees, in which a merry troop of monkeys were frisking. As we arrived before midday, I had an opportunity of taking a ramble in the neighbourhood. For some miles round, the region was entirely uninhabited, and the utmost desolation prevailed. None of the traces of any previous occupation could be seen—none, I mean, of the peculiar weeds which will survive where there has been any cultivation; everywhere there was only bushwood and steppe, except just in the spots where the stone flats were on the surface or where the ground rose into hills, enclosing the valley along which the Mongolongboh wound its course. There was a fine panorama of the vale from the top of the hills, and many a group of antelopes enlivened the general stillness of the scene. My attention was arrested by a plant which was new to me and characteristic of the region; this was the little *Protea*, which occasionally formed complete hedges, bearing a resemblance to the class of vegetation which is found in the south of Africa, but which is very rarely met with in any northern portion of the continent.

Ahmed, the temporary leader of our caravan, had made arrangements to start again immediately after noon, at the same time announcing that we could not expect to be able to reach any place supplied with water at which we could

pass the next night. This statement was quite contrary to the declaration of those who knew the way, and on the following day was refuted. Ahmed, however, persisted in his opinion, and, in his own Nubian fashion, said that he was ready to be pronounced a liar by any one who could disprove the truth of what he said. Wranglings of this sort went on day after day, and occasioned me some disquietude and misgiving.

A gathering storm compelled us to put forth all our energies, by way of precaution, to protect the baggage. The dark clouds rolled towards us, and the encampment was all bustle and alarm. By good chance, however, the storm passed on over our heads, and we had only a few heavy drops of rain. Since the end of last November this was the first day on which any rain at all had fallen. As often as we were threatened with wet, and time did not permit us to erect our tent, I made my baggage as secure as I could, by piling wood and layers of stone upon it, and covering the whole with great sheets of waterproof twill.

Long before sunrise on the 1st of February we had quitted our encampment, hastening our movements through a fear, which was altogether groundless, of there being a deficiency of water. Encompassed by hills, we marched along rising ground, and by the time that the morning light had dawned, we found ourselves at an elevation of about 500 feet above the valley of the Mongolongboh, and with a prospect open before us towards the south, much more extensive than we had hitherto enjoyed. The ridges of hills ran from east to west, and the peaks right and left of the path by which we were proceeding were called by our leaders Mbala Ngeea. Looking to the south we could see a thickly-wooded vale several miles across, and beyond this were two terraces diverging towards the west, which were made conspicuous by the contrast in their colour. The dark blue ridges which were more remote in the S.S.W. were

pointed out as the district of Nganye, and the residence of the first Niam-niam chief whom we should have to visit. Before us in the valley there was visible the low ground of the Lehssy, which, in the lower part of its course, is called Doggoroo by the Bongo; whilst only separated from the Lehssy by a range of little hills, there was still beyond the broad and fertile valley watered by the Upper Tondy, which here receives the name of the Ibba. Among the Bongo its name is simply Bah, i.e. the river, just as the local population of Baghirmi call the Shary, a further evidence of the relationship which exists between the people.

We now descended from the heights and arrived at the Mah, of which the flat bed caused a number of broad pools of water to obstruct our way. This was the water that gave the lie to Ahmed's statement. Along undulating terraces we next reached a wood, which consisted for the most part of wide stretches of kobbo-trees (*Humboldtia*), which gave a light but welcome shadiness to our path. The height attained by these *Cæsalpineæ* is generally about forty feet. They are to be admired for their fine feathery foliage, and for the size of the seed-vessels which hang from the boughs. During the drought of the winter season, when the herbage was short, or had altogether perished through the burning of the steppes, they sent out young sprouts graceful as the main stem itself, which were a charming ornament to the woods. The colour of the tender leaves sported from a bright moss-green to the richest purple, each leaflet being not less than two feet long. The magnitude of the leaves gives a peculiar feature to the woods, which flourish freely on the upper terraces of the district, the steppes in the depressed vale around being marshy and quite destitute of trees.

Making a fresh ascent, we passed upon our left one of those insulated elevations of gneiss which are so frequent in these regions, and which, as they lie scattered and weather-beaten over the plain, have all the indication of

being the remains of some upheaving of the hills above the general level of the ferruginous swamp-ore around. The shape which these islands of gneiss most generally assume is that of a spherically-arched mound, here about 200 feet in height; and of this I saw some thirty examples in different parts during the course of my wanderings. A group of stately harte-beests was parading upon the summit, and surveyed from the distance of half a league the progress of our caravan as it wound its way along the bushy paths. By midday we had reached the Lehssy, and camped upon a flat of gneiss which the waters at their height had washed. At the present season of the year the stream pursued its course beneath the soil, but it had left a considerable number of water-pools, some of them a hundred paces long, and from forty to fifty feet wide, which, overhung as they were by shading bushwood, abounded in fish, especially barbel. By means of small shot I was able to secure a good many of these; and in a country like this where an agricultural life necessitates a residence remote from the river-plains, and where fresh fish is with difficulty preserved on account of the heat, such a catch is invaluable; it is welcomed as a dainty, and makes a most desirable change in the wearisome routine of the daily diet.

The splendid Afzelia-trees which overshadowed the Lehssy gave an additional charm to this halting-place, which was abundantly supplied with water that was as bright as it was refreshing. The level surface of the gneiss answered the double purpose of couches on which to sleep and tables on which to eat. Upon the shadowy banks one of the *Anonaceæ*, the Hexalobus, grows extensively, exhibiting its long tufted flowers, and breathing forth its pungent vanilla-like aroma; the petals, in colour and appearance, resemble little fragments of tape-worm, and are quite unlike any other known plant.

Continually was the repose of night again broken by the

incessant chattering or singing of the Nubians, who ever chose the night-time for their hilarity, and in consequence were all day long as sleepy and lazy as they could be. All at once, when everyone was asleep, they would start up, and as a freak fire a *feu de joie*, startling the nocturnal silence by the whistling of their balls. Even the negroes did not sleep around their fires undisturbed. Under cover of the night every one took care to look after his own individual needs, and to enjoy the morsels that he had contrived to gather in the day-time; and many a tit-bit carefully concealed from the eyes of others all the day, was secretly consumed by the hungry fellows in the dead of night.

On the following morning I was one of the hindmost of the caravan, and proceeded in the company of Ahmed, our guide, and a few stragglers. We had passed two or three watercourses, overhung with copsewood and now quite dry, when we came upon a Mittoo bearer, exhausted by his journey, lying by the wayside. He was a poor withered, consumptive creature, and seemed as if he were pretty near his last gasp. The other bearers had taken his burden from him, and, conscious that he could not carry it farther, had spoken a few cheering words and left him to his fate. By a fair day's walking it was just possible he might regain his home, provided he could keep clear of the prowling lions on his way; but lions, it is known, have a remarkable scent for a poor lone and helpless man. Let a poor fellow be sick or wounded, and he incurs a double danger. Meanwhile, the people who were with me were all discussing the matter in their own way; they could not agree whether the poor wretch were really ill, or whether he was making pretence, and not a few of them declared that no sooner would he have the chance than he would be off homewards as nimbly as a hare. Ahmed at this point put in his word, and observed that a day's journey farther in advance, the man would never have ventured upon being left behind by his

company, for fear of finding his way to the caldrons of the Niam-niam. This observation of his immediately turned the conversation to the subject of the cannibalism of that people, of which I was far from being convinced.

I mentioned that Piaggia had resided a whole year among the Niam-niam without witnessing a single instance of the practice. Ahmed replied that Piaggia had only visited the district of Tombo, where the people were nothing like so bad as they were here in the east, and he asserted that I should only have to wait for a few days before proof strong enough would be opened to my eyes. He went so far as to declare, nay, he swore hard and fast, that he knew a case in which some bearers, who had died from fatigue on the way, had been buried, and that in the interval of his going and returning, their graves had been reopened. Naturally I objected to this statement, that only the day before he had branded himself as a liar, and that consequently his word deserved no confidence; he persisted, however, in his affirmation, and went on to argue that it was not possible that it was any beast that had disturbed the graves; stones had been removed to get at the corpses that they wanted. "Yes," he added, "and I have myself seen them eat foul flesh,—vile, stinking, putrid flesh;" and as he spoke he made grimaces so horrid, that they had every sign of being the expression of a sincere abhorrence. Poor Ahmed! I can think I see him still upon those rocks, expressing his emotion by the gestures of his hands. I can even now hear the vehemence of his oaths. Poor Ahmed! as though he were to be the very first of victims to his own belief, within a few weeks he fell in a *mêlée*, his body could not be found on the scene of conflict, and where should it by any possibility have gone, except into the stomachs of the Niam-niam?

Farther onwards our progress was very much impeded by the high masses of dry grass which had escaped destruction

when the steppes were burned. In the path, which is a mere narrow rift in the steppes, made by those in front forcing themselves through, grass-stems abound so hard and firm, that they are as unyielding as the stubble of a sorghum-field, and make a most disagreeable obstruction in the way. The chain of hills over which we had crossed the day before constitutes the present boundary between the hunting-grounds of the Bongo and the Niam-niam. Indications, however, are not wanting that until a few years ago, the country quite up to the base of the hills had been occupied by the Niam-niam; at present the first district of this people is reached at the farther bank of the Ibba. As we continued our march, we observed a number of half-burnt posts belonging to their huts, and every here and there amidst the grass, there were the remnants of the great wooden drums, which never fail in any village of this people.

At noon we arrived at the Ibba, as I have said the Upper Tondy here is named. About a hundred feet in breadth, but only three feet deep, it offers no difficulty in the way of being forded. The water was running from east to west at the rate of sixty feet a minute, and many blocks of gneiss were lying in the river-bed, which was bounded by gradually ascending banks. I found some deep water beneath a line of overhanging trees, and thoroughly enjoyed a refreshing bath; it was my mishap, however, to experience an inconvenience which occurred to me again more than once in the course of my travels. Half-an-hour I had to wait for my clothes, which had been carried off by the mistake of one of my servants, and taken to the caravan. In my position it was impossible to avoid the heat of the sun, and the skin of an European is too sensitive to endure without mischief a temperature which at the very least was 80° Fahr. in the shade, the ordinary heat of the district in a locality well shaded, but quite open to the influence of the wind.

Upon the southern side of the river were the first culti-

vated lands of the Niam-niam that we had yet seen, and which at that time were lying fallow. Shortly afterwards the ground suddenly rose for some hundred feet. The universal Sorghum is here the prevailing crop, but farther on it is in a very large degree replaced by Eleusine.

We next found ourselves upon the territory of a tolerably rich chieftain, named Nganye, who was on very friendly terms with Aboo Sammat. Meanwhile, for the first mile or two after we left the river, we observed that all the inhabitants vacated their abodes. The name of the superintendent of the district was Peneeo. In all regions like this, where the greater fear happened to be on the side of the natives, the same behaviour was repeated, and very often was accommodating to both parties. In these cases the people with their wives and children, their dogs and poultry, their guitars, their baskets, their pots and pans, and all their household articles, make off to the thickest parts of the steppes, which have been spared from the fire and reserved for elephant hunting; there they hide themselves in an obscurity which only the eye of a bird could penetrate. It will not rarely happen that they are betrayed simply by the cackling of their fowls.

Some of Mohammed's soldiers, who had been sent on in front, returned and brought us tidings of welcome from Nganye, whose residence we hoped to reach on the following day. We found ourselves, however, already very comfortable, as Peneeo, the chief of the district, or Behnky,* had likewise, as Nganye's representative, paid us his compliments; he had brought a supply of corn for the bearers, and a lot of poultry as a present to myself. In his retinue were a number of men, who, although they were not unlike the score of Niam-niam that I had seen at Sabby, yet here in their own home had an appearance singularly wild and warlike.

* Behnky has the French pronunciation of "bainqui."

With their black poodle crops of hair, and the eccentric tufts and pigtails on their heads, they afforded a spectacle which to me was infinitely novel and surprising. Amongst the hundreds of Bongo and Mittoo, with whom the Dinka were associated as drovers, these creatures stood out like beings of another world; here were genuine, unmistakeable Niam-niam, neither circumcised nor crop-headed, such as other travellers have seen either in Khartoom or in the Seribas; here they were, presenting all the features of wildness which the most vivid Oriental imagination could conceive; a people of a marked and most distinct nationality, and *that* in Africa and amongst Africans is saying much.

Pursuing our route on the following day, we passed along a country that was very undulated, and led through many deeply cut defiles which ran down to the river. For three leagues we kept making a stiff ascent over fallow land, until we arrived at the settlement of Nganye. In consequence of the early rains and that which had fallen in the previous night, the ground had become quite soft, and a multitude of those plants which put forth their blossoms before their leaves had sprouted up. Grass so strong and so thick I have never elsewhere seen, as what I saw in this region. Subsequently I penetrated much farther on, and saw the high grass of the southern districts in the height of the rainy season, but on returning in the month of June, I could not suppress my astonishment at the enormous growth which here the grass attained. The dry stalks, in their height and thickness like reeds on a river-bank, are intentionally protected by the natives from destruction when the steppes are burned: and whenever there seems a chance of driving up a herd of elephants, the steppe-burning is only partial, and done in patches. The strongest of these permanent grasses is a species of panicum which the Niam-niam call "popukky." The haulm of this attains a height of fifteen

feet, and becomes almost as hard as wood, and as thick as a man's finger. Cut crosswise its section is not circular, but a compressed oval, its colour being a bright golden yellow. At its lower end it is not hollow like a reed, but quite compact in substance, and if I wanted to make pipe-stems of it, I was obliged first of all to bore right through its length. Of this popukky the Niam-niam construct some very serviceable doors for their huts, and some mats, which they lay upon the ground and use for beds.

Whenever masses of grass of this nature are set on fire, the elephants have no possible escape from certain death. The destruction is carried on by wholesale. Thousands of huntsmen and drivers are gathered together from far and wide by means of signals sounded on the huge wooden drums. Everyone who is capable of bearing arms at all is converted into a huntsman, just as everyone becomes a soldier when the national need demands. No resource for escape is left to the poor brutes. Driven by the flames into masses, they huddle together young and old, they cover their bodies with grass, on which they pump water from their trunks as long as they can, but all in vain. They are ultimately either suffocated by the clouds of smoke, or overpowered by the heat, or are so miserably burnt that at last and ere long they succumb to the cruel fate that has been designed for them by ungrateful man. The *coup de grâce* may now and then be given them by the blow of some ready lance, but too often, as may be seen from the tusks that are bought, the miserable beasts must have perished in the agonies of a death by fire. A war of annihilation is this, in which neither young nor old, neither the female nor the male, is spared, and in its indiscriminate slaughter it compels us sorrowfully to ask and answer the question "Cui bono?" No other reply seems possible but what is given by the handles of our walking-sticks, our billiard balls, our pianoforte keys, our combs and our fans, and other unimportant articles of this

kind. No wonder, therefore, if this noble creature, whose services might be so invaluable to man, should even, perhaps some time during our own generation, be permitted to rank in the category of the things that *have been*, and to be as extinct as the ure-ox, the sea-cow, or the dodo.

Fatiguing enough we found our progress through the towering grass. The path was narrow, and it was very neces-

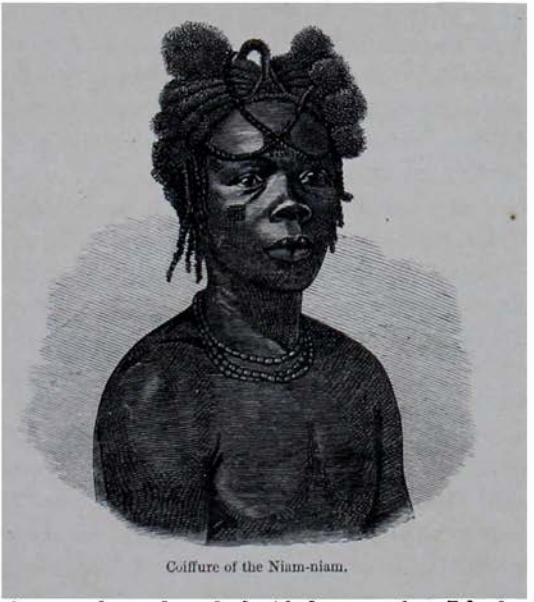
Niam-niam in full dress.

sary to plant one's foot firmly upon the stalks to avoid stumbling on the way. At length towards noon we arrived at the head-quarters of the chieftain, a residence which, in the language of the country, is called his "mbanga."

I found myself at once encircled by the natives, who came streaming in to see for themselves the white man of whom

already they had heard so much. It was my own first opportunity of seeing the Niam-niam in the reality of their natural life. As became a people with whom hunting is a prominent feature in their pursuits, they were girded with skins. High upon their extensively-dressed hair they wore straw-hats covered with feathers and cowries, and fastened on by means of long bodkins of iron or copper. Their chocolate-coloured skin was painted in stripes, like those of the tiger, with the juice of the Blippo (*Gardenia malleifera*).

Whilst I was reposing beneath an awning that had been put up as a shelter from the sun, the natives bestowed upon



Coiffure of the Niam-niam.

me such a prolonged and decided stare that I had ample opportunity for transferring a few of their portraits to my sketch-book.* In the early evening I paid my respects to

* The portraits here presented are those of two dandies, named Wennepai and Schugba.

Nganye, the resident prince. His abode consisted of a collection of huts, some larger than others, which he had assigned to his body-guard, and to the wives and children of his closest associates. The mbanga of a prince may be known at once by the numerous shields that are hung upon the trees and posts in its vicinity, and by the troop of picked men, fully equipped, who act as sentinels, and are at hand night and day to perform any requisite service. Military expeditions, surprises, conspiracies for murder, are here the order of the day, but frequently other and better employments will arise to engage them—as, for instance, when the discovery is announced that a herd of elephants is in the neighbourhood. Then the signals must be sounded, and everyone without delay must be summoned, the occurrence being recognised as of national importance, for there is the chance of securing many hundredweights of ivory, and perchance ten times the weight of meat.

The shields are woven in pretty patterns of intermingled black and white, and are lined with royal leopard-skins. They are fastened by means of an iron knob on the inner side to the "trumbash" (an iron missile with three large projections), and altogether form really a striking sight.

Very modest in its pretensions was the court of this negro prince, and it had little to distinguish it from the huts of the ordinary mortals who had their homes around. The huts were circular, and had conical roofs which were unusually high and pointed, and were probably constructed to throw off the rain outside, as well as to allow for the dispersion of the smoke which was caused by the fire below. Surrounded by a dozen women, who with some household slaves superintended the tillage of the royal domain, Nganye had every appearance of enjoying a peaceful—nay, it may be said, an idyllic—existence.

I found him perfectly naked except for a little apron that he wore. He was sitting on a Monbuttoo stool, quite un-

armed, and with no insignia whatever of his rank. There were, indeed, some twenty or thirty natives who were armed and kept guard in the outer court, but apart from this any pretension to state was entirely wanting. By means of my two interpreters I contrived to keep up a long conversation which I found interesting enough. I was made acquainted without reserve with all the details of Nganye's family, and with all the particulars of his home administration. It was much that I came to him as a friend of Aboo Sammat's. Aboo Sammat was to him a friendly neighbour, who brought to him as his chief an annual contribution of copper, beads, and stuffs; and the prince in return stored up for Aboo Sammat's purchase all the ivory which the year's exertions had secured. As regarded my own native land he did not exhibit the remotest curiosity; concerning the design and object of my journey no particle of interest betrayed itself in anything that he said nor in any question that he asked; and a similar remark may be made with respect to all the chieftains with whom I happened to be brought in contact. As everywhere else in Africa, a welcome is here given by reaching out the right hand; the middle fingers are joined and jerked together until they snap and crack again.

Whilst the cannibal magnate and myself were thus in solemn conference, and were ever regarding one another with that reverence which befits the representatives of noble communities, my retinue was being entertained with roast buffalo meat served up in pretty carved dishes. There was nothing palatable that could have been placed before me, and although Nganye, as subsequently Wando and Munza, accepted food from me, I never did from them. It is extremely unusual for Nubians and natives to take any meals in common, not so much from any religious scruple, but simply because it has never been the custom. In front of me, however, was placed a great clay vessel with four necks

full of Niam-niam beer brewed from eleusine, which my Nubians enjoyed thoroughly as being stronger than anything they can get in their own country.

I presented Nganye with a great many necklaces of garnet-beads of the kind which had been prepared for the East Indian market. My own collection included no sorts except those which were quite novel in this country, having been provided not at all for the purpose of merchandise, but with the express object of making presents. Out of compliment to me, Nganye always wore my gifts as long as we remained in his locality, but, in the same way as other chieftains, he at other times systematically abstained from adorning himself with any foreign trinkets.

On the night of the 3rd of February some rain again fell, but it was not heavy enough to penetrate the grass coverings that we had improvised for our baggage. This was the third occasion on which we had now had rain, and although the fall had been very insignificant, in fact scarcely a quarter of an inch, yet the effect was so great as to be almost magical. Its influence alike upon the thirsty earth and withered steppes was very wondrous, and the sprouting stalks of grass bore ample witness to the invigoration that it brought.

A broad valley, alternately steppe and cultivated land, spread itself out around the residence of Nganye, and through its midst there wound a watercourse which now was dry. Over this we made our way; and mounting the opposite acclivity, proceeded one league onwards to the west, thus for the time reversing our previous progress. Black and barren were the burnt steppes at this season, when the elephant-hunting was all over, and they were unrelieved as yet by any vegetation. Literally our feet trod upon the embers of the burnt grass, very much to the detriment of my own white costume, and involving a large consumption of my soap that had been so laboriously procured from oil of sesame, burnt wood, and oyster-shells. Around the base of the charred

bushes there were little lines of green where the young sprouting herbage broke through the earth, and now and then some opening blossom would give an unexpected beauty to the scene. It almost seemed as if these early-blooming children of Flora had been waiting for a few drops of the rain that they might escape from the womb with the remnant of the sap which it had yet to give. Upon the general gloomy aspect of the landscape these rare scattered blooms of course could make no impression; it was needful to seek for them, and bend low to find them; they were modest as the violet which seems to hide itself by the wayside, and yet has charm enough to detain the passer-by.

A charming walk of two leagues and a half brought us to a subsidiary holding of Nganye's, named after its superintendent Gumba. The villages of the district were abundant in corn, and afforded too welcome a chance for the hungry bearers to resist making there their halting-place; the prospect, moreover, of brimming beer-flasks had its wonted attraction with the Nubians. The goal was full in view; a little ridge of hills beckoned hospitably from afar, and immediately beyond were the broad acres of cultivated land which belonged to Gumba.

A region was this which rarely failed to supply charming halting-places, and we could take our noontide rest in shady yet breezy positions beneath the spreading trees. The tamarind, however, which hitherto had thrown over us its pleasant canopy during our way along the lonely desert, now failed entirely, and I saw it again no further to the south; so also Mungo Park's butter-tree, which had been so prominent a feature upon the red soil of the Bongo and the Dyoor, now disappeared completely from the scene; but on the other hand there were here displayed as much as in the northern latitudes the Parkia, the Afzelia, the Vitex, the fig, and the Khaya, whilst with these there were intermingled many new and striking forms of incomparable beauty.

I. A NIAM-NIAM MINSTREL. *p.* 445.

The country hereabout was tolerably secure, the Niam-niam being desirous to secure Aboo Sammat's friendship in order to ward off any mischief that might arise from the dangerous neighbourhood of Sabby. I considered it sufficiently safe to venture upon a little tour, attended only by my two Niam-niam servants. Directing my steps to the hill, I found that it was only like a hundred others, a pile of brown roe-stone, and apart from the open panorama it afforded, it possessed no interest at all. All along I gathered weeds and plants in ever-fresh variety.

Making at length our halt at a hamlet, my two companions drew my attention to a valuable production of their land. Underneath one of the granaries, which was supported in the usual way upon posts, was a great pile of firmly-pressed clay. On this an old woman was hammering with the pestle belonging to her mortar, and having knocked a hole, she drew out some tubers of a kind that I did not recognise. I afterwards found that it was the Colocasia, which is cultivated very freely throughout the Niam-niam country, and which when boiled makes a very excellent vegetable. The thick covering of clay is put over them not only to keep them moist in the dry season, but also to defend them from the ravages of rats, worms, and white ants. Whenever any of the tubers are required it is only needful to knock a hole through the clay, which can be plastered up again with a few handfuls of fresh mud. The same plan is also adopted in the rainy season to protect the crops from damp and rot; thus clay, everywhere abundant, is an universal antidote to the violence of nature.

As the darkness came on, our camp was enlivened by the appearance of the grotesque figure of a singer, who came with a huge bunch of feathers in his hat, and these, as he wagged his head to the time of his music, became all entangled with the braids of his hair. Altogether the head was like the head of Medusa. These "minne-singers" among the Niam-niam are known as "nzangah." They are as sparing

of their voices as a worn-out *prima donna;* except for those close by, it is impossible to hear what they are singing. Their instrument is the local guitar, the thin jingling of which accords perfectly well with the nasal humming of the minstrel's recitative. The occupation of these nzangah, however, notwithstanding the general love of the people for music, would not appear to be held in very high esteem, as the same designation is applied to those unfortunate women, friendless and fallen, who are never absent from any community. Quite contrary to the practice of the neighbouring tribes, they have nothing to do with boisterous music, and only use their drums and horns for the purpose of signals. The minstrelsy of the Niam-niam may be said to have the character of a lover's whisper.

Starting again and proceeding to the south, after an agreeable walk of about three hours, we arrived at the quarters of Bendo, a brother of Nganye, who had set him in charge of one of his best and most populous districts. The homesteads were all scattered over a wide and well-cultivated area, which extended with a northerly aspect along the declivity of an elevation of gneiss that rose to an altitude of about 200 feet. This hill was named Gumango; before we reached it we had to cross a considerable stream called the Rye, which throughout the year is always flowing. Uninfluenced hitherto by the rain, its breadth was now about forty feet, and its depth was sufficient to allow us to enjoy a pleasant bath at a spot where it ran beneath the shelter of some thick *Psychotriæ.* Tall popukky grass covered the banks, amidst which the splendid Nathalia, with its blossoms fine as those of a horse-chestnut, rose in all its beauty. The whole region, on either side the stream, was well cultivated, and look whichever way we would, we saw groups of farmsteads, although villages, in our sense of the term, did not exist.

Each family resides close to, if not actually upon, the

land it cultivates. The insecurity of property is everywhere so great, that rather than relinquish their incessant watch over their crops, the people submit to many inconveniences and live far away from watercourses, put up with short supply of firewood, and brave the ravages of the white ants. Hostility, in this land, does not simply mean plunder and escape; the enemy is vengeful, and if he can carry nothing off, will damage all he finds, and destroy the rising crops.

The Rye empties itself into the river Sway, as the Dyoor is termed by the Niam-niam, although by the Bongo and Dyoor it is called the Geddy. Close to the rising eminence of Gumango, the Rye upon its left shore receives a considerable stream flowing from the marshy plains, along the banks of which are scattered numerous farmsteads surrounded by plantains. This was the first time I had seen the *Musa sapientium* in any quantities; just beyond the Nile district in the Monbuttoo country it becomes the very staple of the people's food. The cultivation of the plantain seems to be a speciality of all the equatorial regions of Africa, from Uganda on Lake Ukerewe right away to the western lands on the Gaboon and Ogowai.

Our encampment had been made to the north-east of Gumango in a great grove of Zawa trees (*Lophira alata*). Of this tree very few detached specimens are met with. It belongs to a class which flourishes beyond the range of the woods of the river banks, and will grow on a tolerably dry soil. Very noble is it in its growth, and so fine, that Colonel Grant has pronounced it to be the fairest memorial of his famous tour. Its bark is jet black, and it has a cylindrical crown of narrow quivering leaves, which vary in length from a foot to a foot and a half, whilst their breadth is rarely a couple of inches. Whilst it is young the colour of the foliage is purple, which subsequently changes to a deep sap-green. Every leaf is of a leathery texture, deeply wrinkled, and its surface smooth as if it were varnished. The blossoms repose

in thick masses upon the extremities of the boughs; in colour they resemble those of the tea-tree, and emit a fragrant odour sweet as roses. It is one of the most serviceable productions of the country, as its fruit, which is about as large as a hazel-nut, yields a prolific supply of oil, of which the quality is singularly pure, while it is neither rank in smell nor coarse in taste. For my own part I much prefer the oil that is thus obtained to either that of the oil-palm, or of the butter-tree.

All the morning I pursued my botanising on the river Rye, and all the afternoon upon the sides and summits of Gumango. The arched surface of the rising mound of gneiss, stretching out without a rift, was the habitat of several very interesting ferns. Here I found the first specimen of *Encephalartus* which had ever been discovered in the northern latitudes of Africa. The joy of this surprise was no transient thing; but as often as the eye of the collector glances over the treasures he has brought from afar, it surveys a permanent memorial of his successful tour. The Ensete or wild Musa of Africa, which the Niam-niam call the "Boggumboly" (or little plantain) grows likewise in great abundance upon this interesting hill.

As surveyed from the summit of Gumango, the country, with the variegated colours of its cultivated enclosures, exhibited a thoroughly European aspect. Ploughed fields are nowhere to be seen, but the labour is limited to clearing out the weeds, and loosening the surface of the mould to receive the fine-grained eleusine, which no doubt requires more care than sorghum, which latter is sown broadcast.

All the farmsteads at this time had been deserted by their occupants, who had gone away and abandoned their well-stored granaries. Compared to the number of residences the store of provisions was very great, especially when the advanced season of the year is taken into account, for April was the month in which the new seeds should be planted

out. One with another the huts had three granaries each, two of which were full of eleusine in its original condition, the remaining one being devoted to the same grain after it had been malted.

Everything testified to the fruitfulness of the soil. Sweet-potatoes, yams, and colocasiæ were piled up in heaps, and our hungry Bongo and Mittoo fell upon them as though they had entered a hostile country. The receptacles for corn, being circular erections of clay, supported on posts, and furnished with a covering which lifted up and down like a lid, were soon emptied, and the immediate neighbourhood of our quarters was like a scene of rapine and plunder.

The arrangements of the Niam-niam huts are much the same throughout the land. Two, or at most three, families reside close together. Generally from eight to twelve huts are clustered round one common open space, which is kept perfectly clean, and in the centre of which is reared a post upon which the trophies of the chase are hung. Skulls of the rarest kind, splendid horns of antelopes and buffaloes, are attached to this standard, and, it must be added, skulls of men and withered hands and feet! Close in the rear of the huts, upon the level ground, were the magazines for corn; behind these would be seen a circle of Rokko fig-trees, which are only found in cultivated spots, and the bark of which is prized, far more than the handsomest of skins, as a material to make into clothing. Further in the background might be noticed a perfect enclosure of paradise figs; then in wider circumference the plantations of manioc and maize; and, lastly, the outlying fields of eleusine extending to the compound next beyond. I sketched several of the huts, which are embellished externally with black and white decorations. Several of the dwellings had roofs which rose upwards in two points; long poles projected from the peaks alike of huts and of granaries, and on these were strung rows of great land-snails (*Achatina*).

After some time we found Bendo himself arrayed in an apron of red flannel which had been given him by Mohammed. He looked very much disconcerted at seeing his property laid under such heavy contribution, but he was utterly helpless to arrest the havoc. The promise was given that Mohammed, when he arrived, would compensate him for all his loss by ample presents of copper rings and other gifts; and, as matter of fact, we found Bendo, at the time of our return, perfectly satisfied in his old quarters, and ready to show many proofs of the friendly interest with which he regarded me.

Besides Bendo and Gumba, Nganye had four brothers,—Imma, Mango, Nyongalia, and Mbeli,—who acted as his deputies, and had the charge of various districts. Intimidated by his alliance with Aboo Sammat, they were subservient to him with the obedience of vassals. There was, however, a seventh brother, Mbagahli, known by his Arabic name of Surroor, who was the direct subordinate of Aboo Sammat, and had been established in command of the wide country vanquished by him, which was bounded by the territories of Nganye, Wando, and Mbeeoh. Nganye had only two sons recognised as legitimate, Imbolutiddoo and Mattindoo, the former of which was destined to be the heir of his dignity. Nganye's father was Moonuba, one of the six sons of Yapahti, who must not be confused with another prince of the same name whose territories lay to the south of Dar Ferteet.

On the 6th of February our march was maintained for a distance of six leagues until we arrived at the Sway. Whilst marching in single file it was very difficult to hold any communication with those who were before me or behind. Thus for a great part of the way I kept up no conversation at all, and had to obtain all my information about the country at the places where we halted, and where from the examination of several people I could learn the truth; going always upon

the principle that in Africa what *two* witnesses state has some degree of probability, but when *three* agree, there is a moral certainty. As we proceeded, my attention was sufficiently occupied by observing the plants on both sides of our road, and every now and then I counted our steps in order to ascertain our rate of marching, the people, meanwhile, giving me the credit for muttering my prayers.

For the first and last time during our whole journey, I had a sharp contention with Aboo Sammat's soldiers. Their conduct to the natives excited my indignation more and more every day, and an incident now occurred that thoroughly passed my powers of endurance. I could not without remonstrance allow one of the Nubians to maltreat the bearer that had been consigned to him by Bendo, and to strike him till his face was covered with blood, merely because he had broken a common calabash. But however much my sympathy with the negroes might make me a favourite with them, it could only be exhibited at the cost of a sacrifice of friendship with the Nubians, who were so indispensable for my comfort and necessities. I got the reputation of being a partisan and defender of the blacks, and more than once I was bitterly reproached because, as it was said, I reckoned the word of one negro of more account than that of ten Mussulmans. Under all similar circumstances, I learnt as far as I could to keep myself neutral, and thus happily I avoided much friction with either party. But it should be mentioned that I was never a witness of that abandoned cruelty and systematic inhumanity which the accounts of previous travellers in the lands of the Upper Nile might lead us to expect. A traveller to be just will take into consideration all the circumstances of the case and all the ameliorating particulars which may be alleged; but in the majority of these narratives, which make the hair almost stand on end, the judgment that is passed is not unfrequently warped and exaggerated. There is no justification for the

pride with which we civilised people boast of our humanity. We have only to reflect upon the horrors that follow in the train of our wars, and if we could enfranchise ourselves from prejudice we should be compelled to allow that we are worse barbarians than all the Nubians—nay, that we are murderers by deliberate intention, and destroyers of the happiness of the homes of thousands.

As ill-luck would have it, on this same day a bullet came whistling by close to my ear. Once before, during my stay at Fashoda, on the White Nile, as the reader may recollect, I had been in peril of my life through the excessive carelessness of the Nubian soldiers in handling their arms; and not only was the danger renewed now, but a few days later it was repeated for the third time. On this occasion a group had camped out on the side of the road as I was defiling past in the caravan. One of the men had his comrade's gun in his hand, and was apparently examining it, when, as I was within a few paces of him, it went off. All that I heard was the cry of alarm on the part of the man that he wished he had known the gun was loaded; my own people flocked around me in consternation, but I passed on without turning my head, as though I had heard nothing. After the events of the day my mode of proceeding was designed to make an impression on the people, and succeeded in winning the hearts of all, especially as I never passed a single remark upon the whole transaction. The result was that everyone looked upon me as protected by a good star, and that every attempt upon my life would be utterly unavailing.

Our further progress led us, for two leagues from the residence of Bendo, along cultivated lands which were covered with farmsteads. On either hand, and apparently united with Gumango, stretched out ranges of granite hills to the south and south-east. One hill in particular lay to the left of our way, which was very long, but not higher than Gumango. The three succeeding leagues were all down-hill across a

desert, and we had to pass some marshy courses, and several of what for want of a better name may be called "meadow-waters," which at this season of the year were quite dry. These localities in Kanori, the dialect of Bornoo, are called "nyalyam." Barth mentions them as one of the most characteristic features of Central Africa, between the Shary and the Benwe.* The prevailing character of the landscape was that of a steppe lowland, broken now and then by park-like woods.

The southern limit of Nganye's territory is reached at the river Sway, which flows through the desert land which bounds alike his territories and Aboo Sammat's. Just one league before we arrived at the river we passed the hamlets of Marra, who was a "behnky" of Nganye's. The Sway is the upper Dyoor, and according to the uniform representations of the Niam-niam, it is considered as the main stream. I came across its source at the mountain of Baginze, where, although it is but a little brook, it is called by the same name. The proofs that I can adduce for the identity of the Dyoor and Sway are conclusive enough to establish it for a certainty, and they appear worthy of some special notice here, since they may serve to throw some light upon the question of the independence of the Welle, as a system distinct from that of the Nile basin.

1. There is no doubt that the length of the river's course between the two points where I crossed it, the one in Marra's district and the other in Bongo-land, near Manganya, amounts to 145 miles; but the positions, which I accurately determined, of the south Bongo Seribas, belonging to Ghattas and Kurshook Ali, and the assertion of these two men that the Dyoor flows due north from a distance of at least 70 miles

* They correspond to what in the Mark of Brandenburg are called "Luche" (from the Slavonian, "Luga," a pond), being meadow-like depressions from which the water passes by subterranean channels.

above the fording-place near Manganya, virtually reduce the portion of the course that I did not explore to one-half.

2. At Marra, the Sway was already a stream with a volume of water sufficient to have an important share in the formation of the Dyoor.

3. All the Niam-niam that were questioned by me in Kurkur and Dangah, and who came from parts of their native land adjacent to these places, plainly and uniformly called the Dyoor by the name of the Sway; and without ever having been to Marra they were quite aware that the river came from the parts intermediate between the lands of Nganye and Wando.

4. Upon the road which the roving ivory companies of Mundo take over what was formerly Tombo's territory, the Sway is crossed near Fomboa, at a place that corresponds to the curve which the river describes in my map.

5. The most important river flowing towards the north and east that must be crossed by expeditions proceeding southwards from Dem Bekeer in Dar Ferteet, is the Nomatilla or Nomatina, which according to all accounts is identical with the upper course of the Wow or Nyenahm, and is at all events the largest tributary of the Dyoor. From Solongoh's residence, past which it flows, the Nubians have followed the course of the Nomatilla right down into the lands of the Bongo and Dyoor. There are no other important tributaries that the Dyoor can possibly receive upon the left; the Sway must, therefore, necessarily be the whole and entire upper course of the Dyoor.

To myself it was a great satisfaction thus to have placed beyond a doubt the origin of at least one of the principal source streams of the region of the upper Nile; and thus definitely to have assigned its geographical position to Mount Baginze.

The Sway flows past Marra along a level steppe, which on account of the rapid flow and deep channel of the river can

only rarely, and that at the time of the rainfall, be under water. At this time the banks were perpendicular, rising to a height of some 18 or 20 feet, and being cut through layers of alluvial soil very much reminded one of the Nile "guefs." The distance between bank and bank was 40 feet, but the actual river was now about 25 feet wide. Its depth was about 4 feet, and it was flowing at the rate of 120 feet a minute. The volume of water which passed was thus 200 cubic feet in a second, whilst the Dyoor, before its union with the Wow, at the dry season in the end of December, did not roll onward a volume of more than 1176 cubic feet. In the middle of June again the Sway had a volume of 1650 cubic feet to the second; whilst the Dyoor in the rainy season, at the point I have just mentioned, exhibited a volume of 8800 to 14,800 cubic feet.

This apparent discrepancy between the proportions of water of the two rivers at the opposite seasons of the year, is nevertheless quite in accordance with physical laws, and is consequently adapted to the purposes of demonstration. The drainage of the land outwards from its springs takes place in definite channels. These channels are represented by the great rivers which take their rise in the highest districts. The rain, uniformly spread throughout the country, makes its escape to its destination by the courses which are periodically opened in the smaller streams which become tributary to the larger. Compared, therefore, to what they are in the winter, the great rivers are not during the rainy season proportionately increased to the same extent as the smaller.

All the tributaries of the Dyoor (even to the great Wow, to which the Dyoor owes at least one-third of its volume), as far as they are known to me, have in winter the most trifling significance. Upon the right are the Rye, the Lako, and the Lengbe; on the left the Hoo, the Yubbo, and the Bikky. Any small addition which the little affluents might be able to yield in the winter is all lost by infiltration and by

evaporation, so that their entire and united efficiency is so unimportant as to be of no account whatever.

The sun had not risen on the 7th of February when we started on our passage over the river. A bath, no doubt, after the heat and fatigue of the previous day was very refreshing, but on this occasion it was involuntary; and as we waded up to our necks in water I was conscious of sacrificing the cosy warmth which a preparatory cup of tea had given my stomach to the cause of science.

Through a charming bush forest, which, though destitute of large trees, was most imposing in the luxuriance and size of its foliage, our long column continued its march. These bush woods, remarkable for the large dimensions of their leaves, predominate everywhere throughout the countries of the Bongo and of the Niam-niam; they contain little of the nature of the steppes, except in parts where there is space left for the grass to spring up in abundance. Districts destitute of trees could not anywhere be found except upon the rocky flats or amidst the damp and marshy lowlands. The outspread of green was so universal, that, camp where we would, we were like the eggs in a bowl of salad. Let arable land lie but a couple of years in fallow, and it will break out into a young but dense plantation; the roots of the shrubs that have been cut down send up new shoots, and the whole is soon again a mass of verdure. It should nevertheless be mentioned that every tree that is either fine in itself or useful in its product is always spared and allowed to stand. The charm of the landscape at this early season of the year is very fascinating, and beyond a question April and May are months full of delight in Africa.

Before noon we had reached the little river Hoo, which after flowing as far as the eye could reach through continued steppes, at a spot a few leagues further down unites itself to the Sway. At this period it was a mere brook rather than a river, with a level sandy bed varying from 35 to 20 feet in

breadth; it had but a languid flow and seldom was above 2 feet in depth. The banks are very low, and the rainfall consequently soon makes it overflow its limits and swamp the adjacent steppes as far as the very limits of the woods. The plants which flourish on its borders, trees and shrubs alike, clearly reveal that for months together they have been under water.

We took an hour's rest, which was spent in making a cup of tea and in disposing of a kala-bok (*Antilope leucotis*) which I had shot upon our way as a herd had crossed our path. A fine landscape was open before us to the east, and upon the outspread plain were herds of buffaloes of which the movements afforded us some entertainment. They went to and fro in groups of several hundreds along the ground that was furrowed by their tracks, and over land which in the dry season alone was rugged and uneven. Whenever we crossed any extensive river-plains we always fell in with herds of buffaloes; but we observed that vestiges of elephants were comparatively very rare, although the indications were not wanting that even quite recently some had been upon the scene. But to these sagacious creatures a trodden path is a thing to be eschewed, and they prefer to pursue their long marches under the obscurity of night. If any one would prosecute elephant-hunting to advantage, he must, as a matter of course, renounce every other aim whatever.

From the flats where the Hoo lay low, we proceeded through an undulating rocky bush-wood to an adjacent brook called the Atoborroo. Sunk in a deep chasm 80 feet deep it was hardly perceptible from above, and streamed on overmassed by the densest marsh foliage. The vegetation of the woods offered me a fresh feast of plants that I had never before seen, and I enjoyed an especial pleasure in the discovery of thickets of a species of ginger-plant, which filled the valley all around with the most delicious aromatic perfume, and grew quite down to the edge of the water.

Damp and foggy was the following morning as our caravan moved on its way. We had proceeded but a short distance when our advanced party came to a standstill. This was a symptom that a brook or river of some sort had obstructed further progress. These continual delays and interruptions contributed somewhat to the difficulty of keeping a systematic record of my wayfaring experiences. Through the tall grass and high bushes I endeavoured to push my way to the head of the line, but I could only succeed in arriving in time to see the first company follow their banner over the Manzilly. Along a ravine deeply overhung by the broad branching foliage of the fig-trees, the stream rushed on to the north-east, a direction precisely the reverse of what was followed by the Hoo, which ultimately received the waters of all the minor streams which came from the western heights. At every time of the year these water-courses are all very rapid, and generally speaking they run over gravel beds in distinction from the marshy mould of the more sluggish streams. In these cases the tedious process of undressing is limited to merely taking off one's socks and boots, and this is a considerable saving of time.

Shortly after this we came to a small, albeit a very small piece of primeval forest, containing giant fig-trees, commonly called gum-trees, and indeed of a species not unlike the *Ficus elastica*. As a forerunner of greater surprises still to come, there rose before my view the first thicket of the calamus (the rotang or Spanish reed), which deserves a foremost place in every description of the woods that line the river-banks in the Niam-niam lands. It was a "gallery" or avenue in miniature, such as I should find on a larger scale along the side of nearly all the smaller streams to the south. This conception, so necessary to an adequate topographical representation of the land, will be discussed in a somewhat later page.

After a while we reached a second brook beside the farm-

steads of Kulenjo, which are the first settlements of the Niam-niam subject to the immediate control of Aboo Sammat. The possessions of each separate Niam-niam are parted from each other, just in the same way as the territories of the different tribes, by desolate intervals void of any residents whatever, nominally for the purpose of security, so that the inhabitants may by placing out a watch easily guard against any sudden attack. When there is mutual distrust, or in times of open war, watches are of little service in signalling danger, for then every Niam-niam, as a true hunter, passes his whole time in watching and lying in wait.

During the entire day I occupied myself among the magnificent thickets on the stream near Kulenjo, the vegetation, so different from what I had seen in other parts of the Nile district, and of which I had had only a foretaste on the Atazilly, being here revealed in its full splendour. The flora embraces the majority of the plants of the western coasts of tropical Africa that are known on the Gaboon, the Niger, and the Gambia, and overstepping the watershed dividing the Nile districts from the basin of the Tsad, opens to the traveller from the north the unexpected glory of the wildernesses of Central Africa. Though all was but a faint reflection of the rich luxuriance of the primeval forests of Brazil, yet, in contrast to what had gone before, it could not fail to be very charming. Throughout the twenty-six degrees of latitude over which I travelled, the progress of vegetation, according to the geographical zone and the meteorological condition of the successive lands, was organised with wonderful simplicity. For the first 800 miles stretched the dreary desert, giving place to wide steppes, void of trees, but ever covered with grass; next came the delightful region of the bush forests, where the vegetation, divested of the obnoxious thorns of the desert, recalled the soft foliage of his native land to the mind of the traveller, who lastly entered upon what he might correctly call the true primeval forest,

which carried him back to the memories of his youth when he yielded his fancy to the fascinations of 'Robinson Crusoe' or of 'Paul and Virginia.' An identical change gradually supervening in the character of vegetation is perceptible in a contrary direction in the southern half of the continent; and travellers proceeding from the Cape northwards to the Equator have rarely failed to draw attention to the fact.

Nature everywhere proceeds upon the principle of levelling what is opposite and balancing what is extreme: she would seem to abhor the sharply-defined boundaries in which man delights so much, and in accordance with this law she here presents to the eye of the inquirer a transition that is very gradual, so that the limits of her districts overlap one another like the fingers of folded hands. Even in lat. 7° N. small isolated tracts of bank-forest, bearing, however, the characteristic types of the "gallery" flora, are scattered like enclaves among the bush-forests of the distant north. The forests at Okale, at Yagla, and the locality called "Genana," are examples which I have already mentioned.

Nowhere did the guinea-fowl afford better sport than along the stream at Kulenjo; about noon their grey plumage could be seen in the shade of the foliage as they perched aloft in the trees at the edge of the wood, where they could be brought down one after another with the greatest ease. The keen vision of the Niam-niam did me good service in spying out the birds from a distance, for the waving green around me made me almost blind. The early morning likewise is not an unfavourable time for getting at guinea-fowl; they begin their flight very shortly after sunrise, but even then they are too much occupied in securing their food to heed the approach of any tolerably cautious sportsman.

The reader may perchance wonder at my frequent mention of these guinea-fowl, and I would therefore be allowed to explain that the traveller in Africa would be quite at a loss without them, as, with rare exceptions, they form the main

commodity of his daily *cuisine*. In the course of five years I daresay I brought down as many as a thousand of these birds, generally two at a time. By using the lightest shot that can be obtained, and aiming high, failure is quite exceptional, as the smallest grain that hits the long neck is sure to bring down the game. With dogs, even when untrained, securing the birds is a still more easy matter. The guinea-fowl cannot fly far at a time, and therefore when they perceive the dogs in the long grass, they seem to realise their inability to escape, and take refuge on the nearest bough. Often while my dogs have surrounded a tree, I have brought down from a distance of thirty or forty feet one guinea-fowl after another, without a single bird having ventured to leave its hiding-place.

In marching for three days across an open wilderness, the caravan had to be provided by Kulenjo with their ordinary meals, and it was no easy matter in a region so scantily populated to find the necessary food for a thousand hungry mouths. The feeding took place in the evening, and before sunrise in the morning. The whole party of bearers were divided into groups, to which the food was distributed by the different "nyare," or local Bongo overseers, who generally accompany the leaders of these longer expeditions. Handfuls of corn, measured out just as though they were portions for camels or asses, and lumps of bread composed of coarsely-ground impure Teleboon-corn (eleusine), boiled to a pulp, formed the wretched allotment and composed the substance of a meal such as we should hesitate at giving even to our cattle. Frequently in the wilderness they are reduced to the necessity of cooking and eating their corn unground. In comparison with this vile and wretched provision, linseed-cake and bran would be accepted by the Bongo and Mittoo bearers as choice delicacies. The natives bring them their pulpy bread in baskets, and by counting the great lumps of dough, which were packed in green leaves, it was possible,

with some approximation to truth, to estimate the number of families appointed to take their share in providing the supplies.

Dainties more tempting and *recherché* were brought in gourd-shells. The natives who brought these alone formed a goodly company, consisting chiefly of boys and children; the women, being shy, and also jealously guarded by their husbands, remained behind at home.

I must not omit to mention the vegetables, which, when circumstances permitted, were also brought for the bearers. These vegetables, served with sauces, were arranged in hundreds of gourd-shells, pots, and bowls, round the immense pile of the so-called bread. The sauces, which were greatly relished by the Bongo, consisted of a compound of animal and vegetable grease, water, soda, and aromatic herbs. The chief ingredients in the finer sorts were grains of sesame and hyptis, pounded to a pulp, whilst the inferior kinds were mainly composed of the Zawa-oil of the *Lophira alata* and oil of termites. Those with the most piquant flavour are made of dried fish, which is pounded and rolled into balls like cheese; in consequence of the heat of the climate these very soon acquire a *haut goût*. Neither Bongo nor Niam-niam will touch pimento, as they consider its very pungency to be an evidence of its poisonous properties; consequently they seek a substitute in stinking fermented matter.

Common salt is absolutely unknown in this part of Africa; the only salt to be procured being extracted from the ashes of the wood of the *Grewia;* consequently the greasy soups when boiled coagulate almost into a kind of soap, and their flavour may be more easily imagined than described. To make specially attractive sauces there is added the flesh of elephants and buffaloes, which has been previously dried and pounded. Any fat from meat is all but unknown: Nature appears to have quite denied any supply to animals that are wild, and the Niam-niam have no domestic animals like their neighbours; whilst the fat of dogs and men, even if it were

not loathsome to the Bongo, would be far too rare and costly to be used for such a purpose. Such is the usual food supplied to the native bearers, and according to their notion it is probable that no more grateful diet could be prescribed.

At some seasons other products of the soil, such as the larger kinds of gourds, are added to the catalogue of supplies. Gourd-leaves, too, which can be gathered throughout the year, together with various herbs, which are found neither to be unwholesome nor to have the flavour of pimento, are pounded and mixed with the soups. Vegetables proper are rarely grown, but whatever weeds may spring up on all cultivated soils are employed as a substitute, and play as important a part in the economy of the food as many articles that are used on our own tables; they serve partly as material to thicken the soups, and partly as nourishment to satisfy hunger. As I proceeded further on my journey, I found that manioc, sweet-potatoes, and green plantains took the place of the corn-pap and Bongo sauces, whilst it should be observed that in the more northerly regions cereals formed the basis of the food.

On the twelfth morning of our march I rose with the welcome prospect of that day reaching Aboo Sammat's Seriba. Attending to my toilet, and taking my time over my breakfast, I did not quit the camp at Kulenjo until long after the last of the bearers had left. The day brought me along a charming walk, and yielded a fine harvest of botanical treasures; we crossed four streams, passed several isolated hamlets, and finally entered a dense forest of lofty trees. This was no park with its alternations of meadows and thickets, trees and groves: it was a veritable forest in our northern sense, but infinitely more lovely and varied, and not marked by the solemn monotony of our native woods. In contrast to the surrounding country, the forest land extended over an area of many miles to the north and south of the

Seriba, and nowhere did it show an exclusive predominance of any single species. Trees there were most striking and stately, but the most remarkable circumstance about them was the diversity they displayed; a fact that may be comprehended, when it is stated that amongst thirty adjacent trees were found representatives of no less than twenty different classes.

CHAPTER XI.

Aboo Sammat's territory. Jungle on the brooks. Discovery of wild pepper. Giant trees. Modesty of the Niam-niam women. Fresh danger from a bullet. A Bongo poisoned by manioc. Liberal treatment of bearers. Nduppo's disagreement with Wando. Savage admiration of Europeans. The skin-trade. Wando's braggings and threatenings. Formation of columns for war. Natives as soldiers. Difficulties of river-fording. Difference of level of soil on the watersheds. Mohammed's prelude to drinking beer. Division of forces. Primeval forest on the Lindukoo. Rikkete's jealousy. Varieties of genets. Mohammed's *réveille*. Morning toilet of the Niam-niam. Waterfall on the Lindukoo. Magic roots. Watershed of the Nile district. Simple geological formation of Central Africa. The chimpanzee and pandanus found only beyond the watershed. Confusion in crossing the brook. Africa's revenge on the white man. Venturesome interview of Mohammed with Wando. Value of ivory and copper. Definition of a "gallery-wood." Duality of vegetation. Wando visits my tent. Wando's *nonchalance*. A specimen of native cookery. Six Nubians murdered by Niam-niam. The leaf-eater and grass-man.

One of the native chieftains, as I have already mentioned, had exhibited so much hostility, and had been so great an obstacle to Mohammed Aboo Sammat's ivory trade in Wando's district, that Mohammed had proceeded to violence and had wrested away his territory. This chieftain was now dead, and Mohammed in his place had appointed a native spearman of royal blood. Mohammed had a considerable number of these spearmen, natives of the Niam-niam country, who were brought into his Seribas, and having been initiated into the use of fire-arms, formed one of the main supports of his authority. Backed by the continual presence of some forty or fifty armed Nubians, Surroor (for such was the name of the new vicegerent) held sway over a populous area of 700 square miles. According to the joint

estimate made by Mohammed and Surroor, the number of men in the territory capable of bearing arms was not less than 40,000. I believe, however, that half this number would be nearer the mark; for when I test my impressions by comparing them with the results of my careful investigations in Bongo-land, I cannot but think that the entire population of the Niam-niam country, with its wide tracts of wilderness utterly uninhabited, hardly averages 65 to the square mile.

Since here amongst the bearers there is no institution of statute labour, and the number of villages and huts could only be arrived at by careful scrutiny of an entire district, the only means open to me for estimating the amount of population was by taking what reckoning I could of the people who assembled on either side of our route as we passed along. These may be divided into three classes: first, those who had come from mere curiosity; secondly, those who had been ordered to settle in a district to contribute towards the general means of subsistence; and, thirdly, the fighting-force that was displayed in various places during time of war, and which most probably represented the large majority of the men who were capable of bearing arms.

The strongholds in this district consist of one large Seriba and three smaller palisaded enclosures. In these subsidiary settlements discipline is maintained by native overseers with a small detachment of armed men.

The personal relation of the Niam-niam towards their rulers was far less servile than what I had observed among the Bongo and Mittoo. The duties imposed were mainly the same. They were bound to assemble promptly at any signal either for war or for hunting, to provide an adequate support for whatever soldiers and bearers might be brought into the country; to furnish wood and straw for building purposes, and to perform various incidental labours. The

Niam-niam, however, are not employed as bearers upon the expeditions, and upon the whole are less oppressed and are treated with more consideration than the Bongo. At present they can hardly comprehend their state of subjection, and this indefinite feeling is fostered at first by leniency on the part of the oppressors, that they may smooth the way for severer measures in the future.

The power of any native chiefs among such a people of unsettled habits and unpliant temper as the Niam-niam—a people delighting in the chase—is necessarily at present very limited; it cannot extend any further at all than to accomplish the disposal of whatever men may be capable of bearing arms either for the purpose of warfare or of hunting. The official emoluments of these chiefs are derived partly from an allowance made upon all the ivory that is secured, which is always paid without being contested, and partly from their having a right to half of all the elephant meat; but for their ordinary subsistence they have to turn their attention to the cultivation of the fields; and for this purpose they endeavour to increase their home establishments by the acquisition of as many wives and women-slaves as their resources will allow.

I remained at this place from the 10th to the 26th of February. The Seriba was in lat. 4° 50′ N., and was 87 miles south—almost due south—of Sabby. It was situated in the angle formed by the confluence of two streams, the Nabambisso and the Boddo, which were overhung by lofty trees, and in some places were enclosed by dense thickets. Close at hand was the "mbanga" of Surroor.

I spent the daytime in an assiduous investigation of the neighbouring woods. My collection increased considerably, and the paper packets prepared for the reception of my treasures were rapidly filled up. The crowds of natives who came from far and near to gaze upon me afforded me an acceptable opportunity of filling up some pages in my album.

My two Niam-niam interpreters (called in Arabic Gyabir and Amber) felt at home upon their native soil, and accompanied me everywhere, making my intercourse with the natives perfectly easy. I was able to roam about at will in the adjacent jungles, as the environs were as safe as those of Ghattas' Seriba in the Dyoor; and, altogether, I was soon as comfortable as I could desire in this remote land.

The scenery was lovely; the two streams never failed throughout the year to be well supplied with water, and flowed through deep glades where the lofty trees were wreathed and festooned with creepers in clustered grace that would have been an ornament to any palm-house. In the part where the supply of water was diverted to the residences the woods had been considerably thinned. The wild date-palm (*Phœnix spinosa*), which may be considered as the original of the species cultivated throughout the desert region from Senegambia to the Indus, grows here as a low shrub, and together with the calamus forms an impenetrable hedge along the banks of the stream. The double barbs of the calamus cling tenaciously to the skin and clothes, reminding one of the prickly acacia to which the Boers, or Dutch colonists in South Africa, have given the name of "wag-a-bitjen," *i. e.* wait-a-bit.

A new characteristic of the flora appears here in the Amomum, which I found in tall masses on the damp soil near the bed of the stream, and even in the water itself. I saw five different species, with white, yellow, and crimson flowers. The fruit of all the kinds is bright red, and contains a soft pulp which has a flavour like citron, and which envelopes the aromatic seeds known as grains of paradise. The water of the streams runs clear as crystal, and the traveller may at any time allay his thirst by a cooling draught. Here and there the sun's rays force their way through the interlacing creepers which hang in festoons between stem and stem, and in the twilight the foliage gleams almost like

burnished metal. The Ashantee pepper (*Cubeba Clusii*) clothes the trunks with a close network which is thickly covered with bright red berries that grow in clusters as long as one's finger. After the fruit has been dried it makes a very good substitute for black pepper, which it very much resembles in flavour. I was the first to draw the attention of the Nubians to the plant, for, although they had travelled much in the Niam-niam lands, they had no idea that these berries had the properties of pepper, and seemed highly gratified at the discovery. The Niam-niam take the pepper only as a medicine; for seasoning their dishes they are accustomed to use the Malaghetta pepper (*Habzelia*), of which we shall have to speak on a later page. The Ashantee-pepper is one of the most common and yet at the same time one of the most striking of the characteristics of the primeval forests of the district; it forms the finest adornment of the giant trees, and covers the venerable stems of these princes of the vegetable kingdom with a vesture of royal purple.

One amongst the most imposing forms of vegetation is found in a Sterculia of the Cola tribe, called "kokkorokoo." This tree grows to a height of 80 or 90 feet; the stem gradually tapers upwards to a point, whilst at the base it is suddenly expanded to so great a bulk that it would require eight or ten men to encircle it; thence it rises in a mass of narrow arms, corresponding to the direction of the roots, shooting upwards for many feet, like a series of planks joined together edge to edge. The leaves are heart-shaped and form a light and airy foliage, but this commences at such a height above the ground that I was for some time in doubt about the true form of the tree. At length I discovered a shoot bursting from a root that enabled me to realise a proper idea of the plant. It is no uncommon thing in these primeval forests for the botanist thus to see the object of his desire at a height so far above his head that he is unable to attain so much as a single leaf.

It was upon the Boddo that I found the first specimens of Anthocleista. The flora of the Niam-niam countries contains several species of this genus of the Loganiaceæ, which is remarkable for the immense size and small number of its leaves that grow all together at the crown of a single stem running up without a branch. Let any one imagine a tobacco plant magnified to ten times its natural size and placed upon the top of a stem some twenty feet high, and he will then have some idea of this plant with its circling labyrinth of leaves. In any drawing of a landscape the Anthocleista defies every rule of perspective. The equatorial zone alone can boast of plants so unique in character as these, which may be considered as samples of the unexplored splendour of the primeval forests of Brazil.

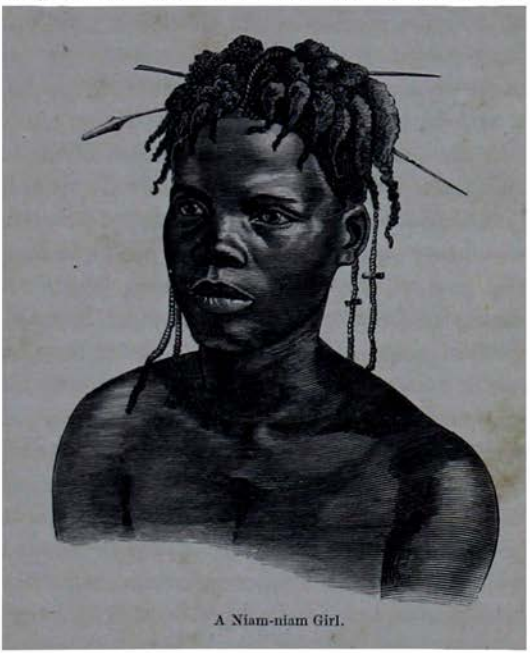
After every ramble I turned my steps to Surroor's mbanga, and my visits there were always enjoyable, because I ever found something fresh that sensibly enlarged my knowledge of the country. There was invariably a large assemblage of natives about the vicegerent's court, and among them a considerable number of women; for Surroor, besides his thronging harem, kept a great many female slaves in attendance upon himself and his wives. As a guest of Mohammed's I was always treated here with the utmost respect. The most elaborate benches and stools were brought out for me to sit on, and Surroor's store of these exemplars of native art was inexhaustible. The choicest delicacies of the country were outspread before me, but these were to me as prohibited as shewbread. I always made a rule of eating alone, and consequently felt constrained to leave the dainties to my interpreters and Nubian servants.

Yes; I took my meals alone. A solitary European, as he proceeds farther and farther from his home, may see his old associations shrink to a minimum; but so much the more, with pertinacious conservatism, will he cling to the surviving remnants of his own superiority. Nothing can ever divest

him of the thought as to how he may maintain the prerogative, which he takes for granted, that he is a being of some higher order. Many a misanthrope, in his disgust at the shady side of our modern culture, may imagine that to a traveller, in his intercourse with the children of Nature, the thousand necessities of daily life must seem but trifles vain and empty, to be dispensed with without a sigh. Such an one may fancy that the bonds which fasten him to the world of civilisation are weak and all waiting to be rent asunder as soon as Nature is left to assert her unfettered rights; but from experience I can assure him that the truth is very different. With the fear of degenerating ever before his eyes, the wanderer from the realms of civilisation will surely fix his gaze almost with devotion on the few objects of our Western culture that remain to him, which (however trivial they are in themselves) become to him symbols little less than sacred. Tables and chairs, knives and forks, bedding, and even pocket-handkerchiefs, will assume an importance that could never have been anticipated, and it is hardly too much to aver that they will rise to a share in his affections.

The social position of the Niam-niam women differs materially from what is found amongst other heathen negroes in Africa. The Bongo and Mittoo women are on the same familiar terms with the foreigner as the men, and the Monbuttoo ladies are as forward, inquisitive and prying as can be imagined; but the women of the Niam-niam treat every stranger with marked reserve. Whenever I met any women coming along a narrow pathway in the woods or on the steppes, I noticed that they always made a wide circuit to avoid me, and returned into the path further on; and many a time I saw them waiting at a distance with averted face, until I had passed by. This reserve may have originated from one of two opposite reasons. It may on the one hand have sprung from the more servile position of the Niam-niam

women themselves; or, on the other, it may have been necessitated by the jealous temperament of their husbands. It is one of the fine traits in the Niam-niam that they display an affection for their wives which is unparalleled among natives of so low a grade, and of whom it might be expected that they would have been brutalised by their hunting and



A Niam-niam Girl.

warlike pursuits. A husband will spare no sacrifice to redeem an imprisoned wife, and the Nubians, being acquainted with this, turn it to profitable account in the ivory trade. They are quite aware that whoever possesses a female hostage can obtain almost any compensation from a Niam-niam.

My exceptional position made it easy for me to procure an order from Surroor that some of his wives should sit for their portraits. This was an unusually favourable opportunity,

and the ladies with their plaited tresses, allowed me to make many additions to my portfolio and to my list of measurements. In this place I measured about fifty different people, taking no less than forty measurements of each. This of course was the work of time, but my trouble was all in vain, for all my notes, with many others, were destroyed in the fire, of which the record will have to be made, on the 2nd of December. Altogether I had carefully registered the measurements of more than 200 individuals belonging to various nations.

During the time that Surroor had acted in the capacity of Mohammed's spearman, he had learnt to speak Arabic fluently, and was therefore able to give me considerable information on many points. I asked many local questions, since the unravelling of the confused hydrographical network in this part of the country was an object which I could never permit to be absent from my thoughts. I was not long however, in discovering that these Zandey (Niam-niam), although possessing such uniformity in speech and customs, had no more knowledge of the remote parts of their country than the majority of the other natives of Central Africa. I may mention, as an instance of this, that no one in this district knew so much as the name of Mofio, whose territory indeed was 300 miles distant, but whose reputation, as one of the chief Niam-niam princes, might have been presumed to be wide-spread.

Another occasion very shortly afterwards had the effect of impressing the people about me with a very lofty notion of the good genius which presided over my fortune, and protected me from injury. A traveller who has learnt experience will understand the desirableness of turning the progress of events to the advantage of his personal reputation. As I was about to take my seat of honour at Surroor's side on a Monbuttoo bench, my life for the third time was imperilled by a bullet fired from the neighbouring Seriba. The

descending ball passed close to my left, and within a few inches of my forehead; glancing off the palm-sticks which were attached to my seat, it dashed through the roof of an adjacent hut. However much I may have been alarmed, I succeeded entirely in disguising my terror. The Nubians do not possess any wad-hooks for extracting either cartridges or bullets; their guns consequently have to be discharged in order to keep them clean and in proper condition. It may therefore be imagined that in the vicinity of a Nubian camp there is a perpetual whirring and whizzing in the air from the incidental firing of these stray shots.

Hunting in this place, as far as we were concerned, was not to be thought of, as the region was far too thickly populated, and the Niam-niam themselves are such devoted huntsmen that they leave nothing for the stranger beyond the few francolins and guinea-fowl which may escape their snares.

During our sojourn, Mohammed Aboo Sammat, with his faithful black body-guard of true Zandey, had arrived from the Mittoo country. The entire united forces then prepared to advance to the south, Ghattas's agent and plenipotentiary not considering that a division could be ventured upon until we had gained sufficient assurance of the peaceful intentions of Wando, whose territory we should have to cross upon our route. Any apprehensions of hostility, however, were soon allayed, and for a time all went well.

By the 25th of February all the preparations for marching were complete, and, reckoning all Aboo Sammat's and Ghattas's people, we were a body of little short of 1000 strong. Our marching column was not much less than four miles in length, so that it happened more than once, after a short day's march, that those in front were erecting their huts with leaves and grass before those in the rear had lost sight of the smoke of the encampment of the previous night.

Just before starting Mohammed had sent some of his

dependents back to Sabby, and I took the opportunity of remitting by them the botanical collection which I had made. Amongst other plants were two specimens of the remarkable Cycadea, which after all the vicissitudes of travel arrived in Europe in a state of vitality.

Only a small portion of my reserve of cattle was now remaining, and the maintenance of the men in the Seriba had quite exhausted the stores; to Mohammed's great annoyance, even the sorghum-seed, which was to have been conveyed to Munza, king of the Monbuttoo, as a curiosity, had been consumed as material of diet, and thus the heart of Africa had been deprived of one advance in culture.

We proceeded, first of all, two leagues in a westerly direction, and after crossing the Nabambisso and two smaller streams, we made our necessary halt. It was on the western boundary of the cultivated district subject to Aboo Sammat, and before we could venture to quit it, an adequate relay of provisions had to be procured from the neighbourhood.

The feeding of the bearers was an animated scene, enlivened as it was by the concourse of some hundreds of the Niam-niam people. The provision for the most part consisted of great lumps of pappy dough piled upon broad leaves, and served with strong-smelling sauces which were brought in pots, bowls, calabashes, and vessels of every variety. Drawn up on one side, in groups arranged according to the order of their arrival, stood the bearers, whilst the Niam-niam in throngs took their position on the other, and many an eager glance was thrown upon the preparations for the general repast. I took my sketch-book in my hand, and wandering through the ranks preserved my observations of the diversified tattooing which everywhere arrested the eye.

To judge from the representations which have been given us by Du Chaillu, Griffon, and other travellers, I should say that in external appearance the Niam-niam very much resemble the people of the Fan on the Gaboon. The two races

adopt a similar fashion of dressing their hair; both alike have the reputation of being cannibals; and from all accounts their domestic arrangements are not very different.

Almost immediately after starting on the following morning we crossed the Nabambisso, and our course subsequently lay across a group of low mounds of gneiss covered with an interesting vegetation. Here grew in great abundance the *Selaginella rupestris*, clothing the bare rock with a graceful carpet of verdure; and here, too, for the first time since leaving the Red Sea, I was greeted with the sight of the Abyssinian aloe with its fiery barb. This plant belongs to the flora of the loftiest mountains; but although the elevation of the country was scarcely more than 2500 feet, yet it was sufficiently high to permit the plant to thrive; in Nubia, too, it flourishes at an altitude hardly higher than that in which it is conspicuous here. After surmounting the gneiss rocks we crossed the Nabambisso for the second time, and marching onwards in a southerly direction we reached a wide depression, called Yabongo, enclosed by dense bushes like the "Luche" in the Mark of Brandenburg, or perhaps still more like a meadow-pool in the sense of the "nyalnyam" of Bornoo. On the edge of the water many wild *Phœnix* of both sexes were flourishing with greater magnificence than any I had yet seen, their stems running to the height of some twenty feet. For a distance now there were no watercourses above ground to be seen, and shortly afterwards we entered upon another valley which was distinguished by the name of Yabo. The interval between the two hollows was filled by woodlands, graceful as parks, and adorned by many a large-leaved fig-tree bearing a multitude of figs much larger than those we ever grow.

While we were here, one of the Bongo bearers died from the effects of eating manioc before it had been prepared and divested of its poisonous parts. For twenty-four hours before his death he had lain in a state of coma, and a strong emetic

had been entirely without effect. In the Niam-niam countries the manioc roots are of the same uncertain quality as those of South America, and the Bongo being unfamiliar with the differences, often do themselves serious injury on their expeditions by partaking of them indiscrimately.

Not long afterwards another of the Bongo people was carried off by a lion from the side of a bivouac fire; and these two were the only deaths that occurred in the course of the two months that Mohammed's caravan was on its outward way. Probably much was due to the salubrity of the air, which contributed to make the men superior to the drawback of unwholesome food, and to all the exertions, fatigues, and deprivations to which they had to submit; but beyond a doubt the fact spoke volumes for the considerate treatment that the bearers received from Mohammed. He spared his people most studiously, and often rated the soldiers very severely whenever they were impatient or harsh with the bearers; he personally superintended the distribution of all the corn, and in his anger I have heard him revile the troops, telling them that they were good-for-nothing rascals who only knew how to go to sleep, and how to bully the bearers.

Towards noon on the 27th of March we reached the Uzze, a small river running almost parallel with the Sway, and of about the same dimensions as the Hoo, only having a much slower current. The river-bed was twenty-five feet wide, but at this period there was not more than a two-foot depth of water. The stream flowed along an open plain, unrelieved by trees, but animated by many herds of buffaloes, which we did not now stay to chase, but which afforded us excellent sport upon our way back. About two miles to the south of the Uzze we crossed the Yubbo, the two rivers here being quite close together, although they diverge again to a distance of several leagues towards the west before they ultimately unite and join the Sway.

The Yubbo at this time was fifty feet wide, and like the

Uzze was only two feet deep; it meandered along a low steppe which was obviously subjected to inundation, a fact that testified to the importance of the river in the rainy season. Estimated merely with reference to the length of its course, the Yubbo might compete with the Sway for the honour of being chief among the original stream-sources which make up the Dyoor, but the comparison of the volume of water which the separate rivers contain demonstrates that it really performs a very subsidiary part. Another argument that very pointedly tends to prove that the Sway is really the main source rests upon the fact that the natives distinguish it, at its earliest risings, in the defiles of the Baginze, by the same name that the Dyoor itself bears among the Niam-niam in what were formerly the states of Tombo. The development of the Sway, from the aggregated confluence of a number of smaller streams, is as characteristic an example of "river-sources" as the records of geographical science can furnish.

After crossing the deep hollow of the bed of the Yubbo, we met some messengers who had been despatched by Nduppo, Wando's brother, to bid us welcome. Nduppo was chief of a district subject to his brother, with whom, however, he was by no means on good terms. From Nduppo himself, of course, we had no hostilities to fear, as nothing could be of more importance to him than to preserve his friendly relations with Mohammed. As we arrived at his mbanga some hours before night, I had time to make a short visit to a deep ravine at no great distance, that was watered by a streamlet called the Nakofoh, which was almost hidden by the dense groves upon its bank.

Our camp had meanwhile been improvised, a number of grass huts having been speedily erected because of the threatening aspect of the sky; towards evening for some days past there had been the appearance as if a storm were rising, but rain had only fallen twice since the beginning of

the month, and even now the clouds were broken. On reaching the encampment I found Nduppo himself in company with Mohammed. I joined them at once, being as anxious as anyone to get what intelligence I could about Wando and his intentions. It transpired that the feud between Nduppo and his brother had become so violent in rancour that Nduppo avowed that he lived in constant terror of being attacked and murdered by Wando's soldiers, and this cruel destiny which he foreboded did actually befall him a very few days after our departure. For ourselves, the following day would decide whether we were to have peace or war.

Our next move was to the quarters of Rikkete, another brother of Wando's, and who, holding the office of behnky, had remained faithful in his allegiance, and was consequently in avowed hostility to Nduppo. The three brothers were part of the numerous family of Bazimbey, whose extensive dominions, a few years previously, had been divided into six small principalities, a heritage which was a perpetual apple of discord amongst his sons. Bazimbey was one of the six sons of Yapahti, who still retain their rule over nearly all the eastern countries of the Niam-niam.

My personal appearance aroused the most vivid interest on the part of Nduppo and his suite. Their curiosity seemed insatiable, and they never wearied in their inquiries as to my origin. Theirs were the first exclamations of a kind which more or less frequently continued to be made throughout the rest of my journey. To their mind the mystery was as to where I could have come from; my hair was the greatest of enigmas to them; it gave me a supernatural look, and accordingly they asked whether I had been dropped from the clouds or was a visitor from the moon, and could not believe that anything like me had been seen before.

And with regard to this appearance of mine, I may mention that amongst these people of the far interior it hardly seemed to be the colour of my skin that principally

excited their astonishment, for even in the remotest regions of Central Africa, tribes that have no conception of an ocean are aware of the existence of white men; but it was invariably my long straight hair that caused their chief surprise, my own purpose in letting my hair grow to an unusual length being that I might be identified at once amid all the countless shades of complexion that were found amongst the Nubians. I enquired whether they had not seen the traveller Piaggia, that white man who but a few years ago had been staying in their parts with king Tombo; but they replied that although they had heard about him, they had never seen him. In my way, therefore, I was quite unique, and truly a *desideratum* in their ethnographical experience.

Nduppo communicated to us many particulars about his brothers, and about the warfare that was carried on between them, and informed us likewise of the death of Bazimbey's brother Tombo, who had entertained Piaggia with so much hospitality. Tombo's kingdom, it appeared, had likewise been cut up into a number of smaller states which still retained all their national hostility to the intruders from Khartoom. The residence at which Bazimbey had lived, during his sovereignty, was pointed out to me, at a distance which, I should presume, was about 25 miles. It was explained to me that a messenger, if he were strong and could walk well, could accomplish the journey in a day, but, it was added that he must not halt on the way, and that he would have to get on apace like a Niam-niam, and not to dawdle like a Bongo bearer carrying his load.

Throughout the whole of the territory that was subject to Wando, the clothing of all the people consisted of skins, as the fig-tree, of which the bark is so generally used in the south, does not thrive here at all well. For all those who require it, the bark has to be imported from the country of the Monbúttoo, and is consequently an article of luxury. Skins

can ordinarily be obtained at a price which seemed to me ridiculously small. For the purpose of getting a few trifling additions which were necessary for my *cuisine* I was in the habit of breaking up some of my larger copper rings into little bits, and I was very pleased to find how far these copper fragments would go in making purchases of skins of various kinds. In this way I bought a fine otter skin (probably *Lutra inunguis*, Cuv.) for about threepence, genet skins for about a penny apiece, and those of the *Colobus quereza* for a very little more. Very plentiful and consequently equally cheap were the skins of civets, *Herpestes fasciatus*, *Felis maniculata*, *F. caracal* and *F. serval*. The skins of the smaller kinds of antelopes, too, were very frequently offered for sale, especially those of the beautiful *Antilope scripta* (the harness bush-bock of South Africa) and of *A. grimmia*, *A. madoqua*, and the long-haired water-bock (*A. difassa*). It is very strange how, notwithstanding this extraordinary abundance and cheapness of skins, traffic in them, as an article of commerce, is entirely unknown in Khartoom, where the dealers seem to have no suspicion of the large demand there undoubtedly would be. Leopard skins, it may be added, were comparatively rare, and were only used by royal personages to line their shields, or according to their own special prerogative, to encircle their heads. Nduppo wore a serval-skin, of which the ends drooped in graceful folds over his neck and shoulders, whilst great pins, headed with pieces cut from the tail of the *Sciurus leucumbrinus*, held it firmly fastened to his luxuriant hair.

Aboo Sammat was known amongst the Niam-niam by the name of "Mbahly" or "the little one," a designation given him long ago by the people, on account of the youthful age at which he had entered their country. Nduppo informed us that Wando had declared, with what was tantamount to an oath, that Mbahly should not this time escape, but that he and all his crew should be annihilated: he, moreover,

told us that the threats had extended to myself. Wando, he said, avowed that he did not want any presents, and that all the beads in the world were nothing to him; if any offerings were sent he would trample them in the grass; if any stuffs were given him he would rip them into shreds; plenty of copper he had already, and for that matter, plenty of ivory too, but he did not intend to part with any of it.

For a long time it perplexed me to discover the reason of Wando's animosity. Only two years previously he and Mohammed had been on the most friendly terms. Mohammed had visited him at his home, and the two had entered into the closest alliance, which had been sealed by Mohammed marrying his daughter, who as I have already mentioned, was now one of the first ladies in the harem of Boïko. But, meanwhile, Mohammed had been in Khartoom, and during his absence he had entrusted the charge of his expeditions to his brother, who had fallen out with Wando. Mutual recriminations led to mutual plunder, and Wando was now in a rage that could not easily be suppressed.

Nduppo led us to understand that in the course of our next march we should receive definite tidings of Wando's intentions. If an attack were resolved upon, his whole force would be assembled and we should be prevented from going on to Rikkete; but if, on the other hand, we were permitted to reach Rikkete unmolested we might then be sure that there would be a temporary peace. And this in reality we found to be the case. As we were approaching Rikkete we were met by Wando's envoys bringing the accustomed conciliatory flasks of beer. Various circumstances might have weighed with the chieftain to induce him to postpone his outbreak. It is possible that he considered that while Aboo Sammat's and Ghattas's companies were united and could muster 300 guns, the time was not arrived for an attack; he also reckoned, with true African craftiness, that it would be more advantageous to himself to fall upon us on our way

back from the Monbuttoo. He imagined, moreover, that all our valuables which he now so contemptuously rejected would fall into his hands without the necessity of any ivory traffic at all, and that our stores (as being an unnecessary burden to be carried to the Monbuttoo and back) would be deposited in his charge until our return; and in addition to all this, it is not unlikely that he counted with some certainty upon receiving plenty of presents from the liberal Kenoosian.

In order to be ready in a moment for any emergency, our caravan for the first time, on the 28th of February, set out on its journey with its disposition arranged according to the rules of Nubian warfare. The entire body being drawn out in columns, the whole of the armed force was divided into three companies, each headed by its own banner. In front of all marched the first division of the troops, followed by the bearers with the linen goods, the bars of copper, and the store of beads; in the middle of the train was the second division, which had charge of the bulk of the ammunition, chests of cartridges and boxes of powder and caps; then followed the women and female slaves, whilst the third division brought up the rear. For the general security it was ordered that no straggler should be permitted to lag behind or to go farther back than the standard-bearer at the head of the third division. From the nature of the path all were obliged to march in single file, and thus our train, although as compact as possible, swelled out to an enormous length. Independently of the main body, a troop of native soldiers, composed of Bongo and Niam-niam slaves, that had been armed and well trained by Aboo Sammat, was now detached to reconnoitre the thickets in front and on either hand, and to make sure that the advance was safe. As a general rule, these blacks made much more effective soldiers than the Nubians, and upon them fell the heaviest of all the work of war. Their employment of hunting, which

is a pursuit much too laborious for their oppressors, makes them far more expert and practised shots, and besides this, they are heartier in their work and fear neither wind nor weather.

Whilst all the Nubians who carry guns are dignified by the high-sounding title of "Assaker" (soldiers), the natives who may be enlisted are called in the common jargon of the Soudan Arabic, either "Narakeek," "Farookh" or "Bazingir." The precise etymology of these various designations I could never ascertain. There are, however, some words which occur so frequently in the conversation of the Khartoomers that they become indispensable for fully describing the details of service in the countries of the Upper Nile. The "Narakeek," for instance, would appear to be the only men who are trusted with the heavier guns, of which a considerable number, originally intended, no doubt, for elephant-hunting, are now found in the companies of the Khartoomers, and form what might be called their artillery. Mohammed Aboo Sammat had twenty of these guns, of which I ascertained that the majority were manufactured by Roos of Stuttgard. They are not loaded either with conical shot or with explosive bullets, but merely with a handful of heavy deer-shot; their action is very effective, and their first discharge amongst a party of savages rarely fails to send them scampering off at full speed.

It was in crossing the beds of the brooks and in getting through the thickets that bounded them that the greatest precautions were requisite. All our long experience had made us quite aware how easily a caravan may be thrown out of marching order and put into the greatest confusion by the mere irregularity of the soil, and under such circumstances every attempt at defence must be unavailing: bullets might do some service when deliberately aimed at an open foe, but would be utterly useless when fired at random from amidst a labyrinth of trees or in the obscurity of a thicket.

Between three and four hours were occupied in reaching Rikkete's mbanga. Half-way on our road, after crossing three smaller streams, we came to a larger one, which, like the others flowing to the south and to the east, passed near the hamlets which lay contiguous to Nduppo's frontier. Here we halted for our morning meal. The bearers ransacked acre after acre for the sweet-potatoes which were in cultivation in this district, where also, for the first time in our descent from the north, we found manioc plantations of any magnitude. Only in deference to an express order that the poultry which was running about the forsaken huts should be respected as the property of others, did the people abstain from catching the hens and chickens that were within their reach, but it was an act of self-denial, and they were compelled to content themselves with plantains cooked in ashes. Altogether it was a motley picture of African camp-life: the ravaged lands, the chattels of the fugitives scattered all around, the variety of platters, the corn-bins, the wooden mortars, the stools, the mats, and the baskets, all tumbled about at the pleasure of the intruders, conspired to make a spectacle of confusion so utter and so hopeless that the only relief was in resignation.

Beyond the stream our path turned directly to the south; hitherto its direction, though winding, had been mainly west. The continual fluctuations in the level of the land made me suspect that we were really approaching that watershed of the Nile for which I had been looking with such eager and impatient expectation. The ground, that had been sloping down towards the west all the way to Nduppo's mbanga, we now found sloping down towards the east, so that the streams that proceeded from this district to meet the Yubbo for a while flowed in a direction exactly opposite to that of the stream they were about to join. A comparatively important stream, the Lindukoo, at a little distance received all these other streams into its channel and was the last

water connected with the system of the Nile that we had to cross. Over steepish hills, along defiles of slippery clay and through clefts and ravines which the rain-torrents had capriciously hollowed out, our road led us onward to Rikkete. Contrary to our expectations we were received amidst the mingled noise of drum and trumpet, whilst a deputy from the chieftain stood in front of his huts to bid us welcome.

We encamped upon some ground that was still fallow, for the few showers that had fallen were only the forerunners of the settled rain which lasts from May till October, and had had little effect upon the soil, so that the sowing of the crops had not yet commenced. Our camp was close to some groups of huts that were inhabited by Rikkete's wives and retinue; and behind it, under the shadow of imposing banks, flowed a brook called the Atazilly.

Mohammed entered into very amicable relations with Rikkete, and not only obtained some valuable tusks from him by way of traffic, but secured an ample supply of provisions for the immediate use of the caravan. Towards evening some messengers arrived from Wando, confirming his friendly intentions and bringing, as peaceful pledges, an offering of flasks of eleusine-beer. At night we were in company with Rikkete, and Riharn my cook, who had but few opportunities of displaying that skill in the culinary art which he prided himself upon learning in the large hotel at Cairo, prepared some farinaceous dish in the European style with which I entertained the Niam-niam magnate. The article that seemed to puzzle the people most was our sugar; they could not comprehend how it should have all the appearance of stone and yet melted in the mouth, tasting like the juice of their native sugar-cane, which was cultivated among them, although not to any great extent.

Before tasting the proffered beer, Mohammed insisted upon Wando's emissaries emptying one gourd-shell after another

for their own enjoyment, a proceeding which had the effect of considerably elevating the spirits of the party. The Nubian soldiers, pleased at the pacific turn that matters had taken, passed the night in chanting their carols, accompanied by the strains of the tarabuka; and the Bongo and Mittoo revelled and danced for many hours in their own fashion to the sound of their kettle-drums and horns.

There seemed now to remain no further obstacle in the way of the separation of the two companies; and, in order to complete the preliminary arrangements for the division, it was decided that we must remain for a whole day with Rikkete, a determination which was hailed by myself with much satisfaction. Ghattas's corps was to be accompanied by a detachment of one hundred of Aboo Sammat's soldiers, and to take its departure for what formerly had been Keefa's territories in the west and south-west, where they hoped to transact a remunerative business, because, in consequence of the absconding of the natives, the main company of Ghattas had been left destitute of any bearers. After the reduction, an armed force of 175 was left for our protection as we proceeded on the remainder of our way to the Monbuttoo.

Early on the following morning I paid Rikkete a visit at his residence in the village, and made him what I considered a handsome present of beads of a pattern superior to what had ever before been seen in this part of Africa. I, however, received no present in return, but on the contrary had to pay for the simplest things with which I was supplied, whether they were sweet-potatoes, colocasiæ, or poultry. The Niam-niam are an acquisitive people, and never lose an opportunity to increase their store of copper, attaching comparatively little importance to any other wealth. Once when I was complaining that in spite of my liberality I could not obtain the most trifling articles for cooking without giving a full price for them, I was met by the true

African answer that if they took the trouble to bring me their commodities I must expect to pay for them.

My visit to Rikkete over, I could not resist spending the day of our halt in an excursion. Accordingly, having enlisted the services of some natives as guides, I started off with all my people, who had to carry my heterogeneous appliances, which consisted of guns, portfolios, boxes large and small, cases, ropes, trowels, stock-shears and hoes. Crossing the Atazilly, and wading by the side of the stream through the swamps which were crowded with jungles of amomum as high as myself, and adorned with the rosy blossoms of the *Melastomaceæ*, I proceeded for three-quarters of a league across the steppe until I reached the stream to which I have referred already, called the Lindukoo or the Undukoo.

Here there opened to my view one of the most magnificent prospects that forest scenery could afford; the gigantic measure of some of the trees was altogether surprising, but yet, on account their various heights, their foliage lay as it were in strata, and the denseness of the ramification wove the branches into a chaos as picturesque as it was inextricable. A merry world of apes was gambolling on the topmost boughs; two of the larger species of monkeys (*Cercopithecus*) were also represented, as well as members of the *Galago* family, which are half-blinded by the glare of daylight. The *Colobi*, too, with their long silvery hair, were conspicuous as they flitted across the dark gaps that were left in the lower branches, or as they scampered along the more horizontal arms of the trees above. Numerous, however, as they were, I had no chance of securing a single specimen, as my shot, when aimed to an altitude of seventy or eighty feet, was spent in vain. The guinea-fowl, as ever, afforded prolific sport, their large grey bodies standing out distinctly against the fresh verdure; but we lost a great many that were hit, in consequence of their falling into the midst of impenetrable masses of shrubs.

Accompanied as I was by only a small number of armed men, I could not be otherwise than sensible how completely, if they chose, I was in the power of the natives. I was encouraged, however, to believe that the engagement made was perfectly reliable, as, except under that conviction, consent would never have been given for the armed forces to divide.

My Niam-niam guides rendered me the greatest service; not only did they enter very heartily into my pursuits, climbing up the lofty trees without hesitation to reach the produce of the topmost boughs, but they made me acquainted with the native names of all the plants, and brought me specimens for my close inspection of what otherwise I could merely see at a distance, and in the confusion of promiscuous foliage.

Though the hollow gorge of the river sank for some eighty feet, there were trees at the bottom whose crests were level with the land above. The protruding roots amid the landslips, just as in our own mountain hollows, served as steps; and all along, abundant as in Alpine clefts, there sprung up many a variety of graceful ferns.

I proceeded north-west for a considerable distance up the stream, and having laboriously crossed and recrossed the swampy bed of the valley, I returned in the evening to my quarters with my portfolios enriched beyond my most sanguine expectations. Before night, I repeated my visit to Rikkete's residence, and found his wives sitting on the open area before the huts, and employed in their several domestic ways. My intrusion appeared to give the ladies great uneasiness, and the interpreters themselves put on a grave look of concern and were ominously silent. I was just about to transfer the scene to my sketch-book when Rikkete suddenly appeared. He reproached me vigorously, insisted upon knowing what business I had amongst his wives, and demanded how I presumed to go to his huts without his

knowledge or permission. These Niam-niam wives for their part were very passive, and as quiet and reserved as though they had been brought up amidst the refinements of a Turkish harem. Rikkete, too, was soon appeased. He was a true son of the desert; but his general demeanour, the reserve of his bearing, and the moderation of his tone, were worthy of him as a man of royal blood who, conscious of his superiority, could, when he pleased, converse with the most perfect self-possession.

In my subsequent transactions with the natives, I was again offered a great number of skins; this time skins of genets, which were represented in several varieties. I discriminated them into three sorts, according to the number of the stripes made by the spots that ran along the body. The general colour appeared to change with the creatures' age. The ground colour varied from a light ash-grey to a deep yellowish brown, while the spots ranged from the colour of coffee to a perfect black. In consequence of these diversities zoologists have very probably been misled, and have been all in error when they have described the *Viverra genetta* as being of several species.

In the glimmer of dawn we were aroused by the accustomed signals. Two of the Bongo in Mohammed's service had learnt at Khartoom how to blow their trumpets and beat their drums for this important function, and they sounded the Turkish *réveil* admirably, giving it the full roll and proper compass. In particular, Inglery the trumpeter was superb in his execution, and the astonished woods could not too often re-echo back his clanging notes. The Niam-niam were quite delighted with the strain, and frequently could be detected humming the melody to themselves. Wando and Munza alike were never weary of urging the request that Aboo Sammat would either make them a present of his trumpeter, or allow them to purchase him at any price he might elect to name; but Inglery was the joy and pride of

Mohammed, and in his way was quite unique throughout the district of the Upper Nile as far as the banner of Islam had been borne.

Our caravan was accompanied by a large number of guides and natives who were eager to show the way, as a stiff day's march was before us, and a passage over several difficult water-courses had to be accomplished. The morning toilette of the Niam-niam guides was singular enough. In order to protect themselves against the chilly damp of the early dew as they marched along the narrow pathways of the steppes, they covered the entire front of their body with some large skins, which made them look as if they wore coopers' aprons. For this purpose there is no skin that looks more picturesque than that of the bush-bock, with its rows of white spots and stripes upon a yellow ochre ground. The bearing of the Niam-niam is always chivalrous as becomes a people devoted to war and to the chase, exhibiting a very strong contrast to the unpolished nonchalance of the Bongo, the Mittoo, and even of the finicking Arabians. The Niam-niam might be introduced straight upon the stage, and would be faultless in the symmetry with which they would go through their poses.

Our way took a turn beyond the Atazilly across the same steppe over which we had passed yesterday. After an hour we arrived again at the Lindukoo, which here forms a considerable cataract of some thirty feet deep, falling over the worn and polished gneiss. A thick bank-wood shaded the rocks, which were charmingly adorned with the rarest ferns, and a regular jungle of tangled foliage canopied the depth beneath which the rosy blooming ginger-bushes grew as tall as a man and scented the air with their fine aroma. Just for half-an-hour we halted upon the high and dry levels that we found, and regaled ourselves with refreshment from our store of provisions.

An early rest like this was quite common with us, for in the confusion of our starting at the dawn of day there was

seldom any leisure at all to think of breakfast. Our leader, neither proud nor upstart, but like all Nubians, whose finest quality is their sense of equity and brotherhood, munched away amidst a circle of his more intimate associates, to which my Khartoom attendants were admitted, at some cold fowl seasoned with pimento, which was the choicest morsel that the country could supply. With the flowery yams, the sweet-potatoes, and the colocasiæ, which appeared such an invaluable boon to the country, the Nubians could do nothing, so unaccustomed were they in their native place to vegetables of any sort: what they missed most was plenty of their flat cake of kissere; quite voluntarily they renounced all meat. They carried with them a supply of the capsules of the *Hibiscus esculentus*, dried before they were ripe, and by the aid of the indispensable red pepper and some fat or oily substance, they manufactured a slimy sauce in which they soused their kissere. They were epicures enough to carry with them in a horn their own "duggoo," which is a kind of pot-pourri composed of every condiment they can procure, being a combination of salt, pimento, fœnum græcum, basilicum, coriander, mustard, dill, and a variety of other ingredients of the kind.

But now for a time the days of kissere and sorghum-pap were over. Now for awhile they had to put up with eleusine, that tiny, scaly, black and bitter grain of which Speke declares that it is sown, because the spades, which do such an amount of mischief to other seeds, leave this uninjured—the same *Eleusine coracana* (called teleboon in Arabic and raggi in the West Indies) which on account of its extreme bitterness was condemned by Baker as being putrid and unfit to eat. Leaving it for the people who seemed to enjoy it well enough, he made the remark that "the lion dies of hunger where the ass grows fat."

There was a general belief in magic. One day, my servant, Mohammed Ameen, would get it into his head that I had found a plant from which I could extract gold; on the

next day it would be some wonderful skull that I had found, and from which I knew how to extract the subtlest poison; the day after and I had the luck to kill an antelope because I was in possession of some marvellous root. With plain matter-of-fact these good people cannot get on at all: that every herb must have some medicinal properties and use would appear never to have entered the minds of any but Europeans. "Knowest thou the herb that gives perpetual youth?" is the question that the Oriental asks; and mysterious secrets are yet to be unfolded to the African.

No one clings more than a Niam-niam to the superstition that the possession of certain charmed roots contributes to the success of the chase, so that the best shots, when they have killed an unusual number either of antelopes or buffaloes are usually credited with having such roots in their keeping. The fatalism, which is exhibited just as decidedly by Mohammedans as by heathens, is such that it does not attach the least importance to the skill with which an arrow or bullet is aimed. This is a reason why the Khartoomers are never practised in the art of shooting; they do not doubt but that whatever is designed for the unbeliever is sure to hit its mark.

The direction which the river Lindukoo was taking appeared to me to be exactly the reverse of that in which flowed the current of the Yubbo; and, in spite of the positiveness on the part of the guides, all their statements left my mind unconvinced, and in a state of considerable perplexity. But two months later when I had again to cross the river some distance further to the East, my presentiment was thoroughly confirmed. The formation of the land just here is very uneven and irregular; quite in contrast to what it was observed to be both previously and subsequently upon our progress. With the Lindukoo, then, I was bidding farewell to the district of the Nile. Many as there had been before who had undertaken to explore the mighty river to its

fountain-head, here was I, the first European coming from the north who yet had ever traversed

The Watershed of the Nile.

Upon this memorable day in my life, I confess I had no real knowledge of the significance of the soil upon which my steps were tarrying, for as yet I could know nothing of the configuration of the country before us. The revelation of the truth about this watershed only became apparent to me after I had gathered and weighed the testimony of the Niam-niam, which sufficiently demonstrated that the next river, the Mbrwole, belongs to the system of the Welle. This river *now* was an enigma to me, and to unravel the hydrographical perplexities which surrounded it, continued throughout my journey to puzzle my brain; certainly I was satisfied it could never be brought into unison with any of the tributaries of the Sway. A little patience, and the problem was solved.

With the exception of the high ridge on the north of the River Lehssy which the Niam-niam call Mbala Ngeea, there was nowhere, along the entire line from the Gazelle to the Welle, any wide difference observable in the conformation of the land. But southwards from the Lindukoo, it was all uphill and downhill, and through defiles, hill-caps rising and falling on either side, high enough to be prominent over the undulations that were around them. These undulations were everywhere of that red hue which rendered it all but certain that they were only elevations of that crust of recent swamp-ore which is so widely diffused in Central Africa. The higher eminences that rose above were of a far earlier formation, being projections of gneiss, the weather-worn remnants of some primeval mountain ranges, gnawed by the tooth of time, and crumbled down from jagged peaks to smooth and rounded caps. Subsequently, on my return at the end of April, I pushed my way beyond these elevations

of the gneiss, and penetrated farther east, into the narrower limits of the watershed.

This uniformity in geological formation of a district so immense, as far as it is known, is certainly very remarkable. The source of the Dyoor is the only exception, and presents some variety in stratification. Everything points to the fact that since the era of the formation of the swamp-ore (spreading as it does from the banks of the Dyoor to the Coanza, and from Mozambique to the Niger) there has been no alteration in the surface condition of the land except what has occurred by reason of the water-courses finding new directions for themselves along the loose and yielding deposit. And even when the elevations are taken into account which have caused whole chains of hills to arise, such for instance as those which encircle the basin of the Tondy, still I am inclined to believe that there too the existence of the valleys and depressions is to be explained by no other hypothesis than the perpetual mutability of the channels by which the streams have forced their way.

Followed in our course from the Lindukoo by a side stream which discharged itself by a waterfall, we arrived at the regular watershed, which, judging by my aneroid, which had not varied for four years, I should estimate at 3000 feet high. Passing onwards we came to a brook called the Naporruporroo which rippled through a gorge some seventy feet deep. The stem of a great tree had been thrown across the chasm, and by means of this we were enabled to pass over without being under the necessity of making a descent. As we proceeded, the peaks of the trees which grew beneath were some way below the level of our feet. After a while, we had first to cross another, and then another of these streams which at no great distance united themselves in one common channel.

The stream I have just mentioned was at the bottom of a valley some eighty feet deep, and as its banks were almost

perpendicular the bearers had to make the most strenuous exertions to ascend. They had to help each other up, and the baggage therefore had to be passed on from one to another of the men, and then to be laid down awhile that they might have their hands at liberty to help them as they climbed. To accomplish this difficult passage at all with four-footed beasts of burden it would have been requisite to make a very long and arduous *détour*. The detention, however, to which the difficulty subjected the caravan was not in any way a loss to me; it gave me time to stay and gather up what I would of the botanical treasures of the place, which in luxuriance seemed to me to surpass all that as yet I had seen. The valley was so deep that no ray of sunshine by any possibility could enter it. The pathway was barely a foot wide and wound itself through a mass of waving foliage. There was a kind of Brillantaisia with large violet blossoms that I found close by the way; and I stayed to arrange in my portfolio, for future investigation, some of its leaves, waiting while our lengthy procession passed along. Squeezed up in a labyrinth of boughs and creepers, and wreathed about with leaves, I sat as though I were in a nest. These opportunities were several times repeated, in which I found I could get half an hour at my disposal, and could botanize without disturbance; then as soon as the caravan had defiled past I took advantage of the first open ground to regain my position near the front.

So numerous were the hindrances and so great the obstacles which arose from the ground conformation of the watershed that our progress was necessarily slow.

About four miles from Lindukoo we reached the Mbrwole, which the Nubians without further description simply call "Wando's River." It was here bordered by wood, and had a breadth of about eighty feet, though its depth did not exceed two feet, the flow of the stream being what might be described as torpid.

Aboo Sammat's people gave us all the particulars of the year's luck in hunting, and dwelt much upon the circumstance of a chimpanzee having been killed, an event which was evidently very unusual. The woods that composed the "galleries" were dense and manifestly adapted to be a resort of these creatures. The fact was of considerable interest as relating to the watershed, because in none of the more northerly woods had I ever been able to acquire any evidence at all that the chimpanzee had been known to exist. It was remarkable that the first trace I found of this race of animals was upon my reaching the first river that was unattached to the system of the Nile. It may be said of the district of Wando, where bank vegetation is most luxuriant and where the drainage is like a complication of veins squeezed from an overcharged sponge, that it is the region which, more than any other, is conspicuous for the abundance of the chimpanzee, which here represents the breed of the West African *Troglodytes niger*.

Countless in diversity as were the trees and shrubs, the *Anonaceæ*, by mere reason of their numbers, must take a very prominent place in the catalogue. A family of plants is this of which, so long as the flora of tropical Africa was unexplored, it was presumed that America was the chief, if not the exclusive habitat. But since our knowledge has been enlarged, and especially since my own investigations in the Niam-niam lands, it has become clear almost beyond a question that Africa is at least as prodigal in the Anonaceæ that it yields as all the tropical districts of America.

Again for two hours we made a pause. The Nubians enjoyed a bright cool bath, the long column of bearers still toiling onwards with their loads. The opportunity to myself was as acceptable as ever, and I continued to secure a new abundance of botanical treasure. By way of variety, intelligence was brought us that a gun had gone off through negligence, and that the ball had rent a hole in the apron

of one of the soldiers. Of course there was a great outcry and no end of gesticulating. The culprit took with the most passive resignation the lashing that was assigned him, and then all was forgotten, and something fresh had to be awaited to stir up a new excitement. The people are fatalists of the purest water, and no amount of experience can make them prudent.

Farther on, a march through a flat and open steppe led us after a few miles to a deep glen so thick with wood that it occupied us at least half an hour in crossing. Its bottom was a wide marshy streak over which there was no movement of the water, that seemed to be entirely stagnant. A new type of vegetation revealed itself, one never observed in the Nile lands by any previous traveller. This consisted of the thickets of Pandanus, which were to my mind an evidence of our having entered upon a new river-district altogether, the plant being an undoubted representative of the flora of the western coast.

And now we had to make our first experience of the various artifices by which the transit over these marshes has to be accomplished; not only would it be impossible for a carriage of any description or for any one on horseback to go over, but even when the baggage was conveyed by hand there was the serious risk of anyone seeing all that he most cared for, his clothes and his journals, tumbling from the bearers' heads and sinking in the filthy slime. Mouldering trunks of trees there might be, but to place the foot upon these was to find them roll like a wave in the waters; others would be too smooth and slippery to allow a step to be trusted to their treacherous support; and then the deep continual holes would either be filled by water or covered with a floating vegetation which betrayed the unwary footsteps into trouble, so that there was no alternative for the bearers but to jump from mound to mound and keep their balance as best they might: to no purpose would they try

to grasp at some support; the prickly leaves of the Pandanus, notched and jagged on the edges as a saw, made them glad to withdraw their tortured hand.

For miles far away the deserts re-echoed back the shouts of the bearers as they splashed through the waters; and the air around reverberated with the outcry, with the mingled laughing and swearing of the Nubians, and with the fluster of the women slaves as they jostled each other in carrying their dishes, gourd-flasks, and calabashes, through the prickly hedges. Every now and then would arise a general shriek, half in merriment, half in fright, from a hundred lungs, betokening that some unlucky slave had plumped down into a muddy hole, and that all her cooking utensils had come tumbling after. I could not help being on continual tenter-hooks as to the fate which would befal my own baggage, particularly my herbarium, which although it was packed up most cautiously in india-rubber, yet required to be handled very gently. My Bongo bearers, however, were picked men, and did their work well. They waded on and never once had any misadventure, so that it resulted that everything, without exception, that I had gathered in these remote districts of Central Africa, was spared alike from loss or damage.

Dressing and undressing on these occasions was tiresome enough, but it was not the whole of the inconvenience. When the task of getting across had been accomplished, there still remained the business of purification; and no easy matter was it to get free from the black mud and slime that adhered tenaciously to the skin. It almost seemed as if Africa herself had been roused to spitefulness, and was exhibiting her wrath against the intruder who presumed to meddle with her secrets. With a malicious glee she appeared to be exulting that she was able to render the white man, at least for the time, as black as any of her own children; nor was she content till she had sent a plague of

mud-leeches to add to his discomfort. Naked and shivering she let him stand even in the mist and rain of a chilly dawn; and no help for him till some friendly hand should guide him to a pool where the water still was undefiled, and he could get a wash. And then what a scraping! How ruefully too would his eye fall upon the ugly blood-suckers which clung about his legs! To make these relax their hold, recourse must be had to the powder-flask; and, after all, the clothes would be saturated with the blood that had been shed in vain. As for the things that had been splashed and wetted in the turmoil of the passage, they were laid out either upon a cluster of trampled fern-leaves or upon any little spot that seemed to give them a chance of drying.

The sun was already declining, and we had still three of these bogs to pass over, each with its running stream that would delay us for half an hour or more. Of these three, the second was the largest, and was known by the name of Mbangoh. Notwithstanding the vexation and harassment, to which I was unaccustomed, I found many an opportunity of gathering shrubs and plants of interest from the promiscuous vegetation amidst which we made our way.

The shades of night had gathered, when, after passing the last of the rivulets, we arrived at some farms in a cultivated spot. There was indication of rain, and a great deal of commotion ensued in taking precaution against it; luckily, however, we escaped with only a few heavy drops, and having been relieved from anxiety by a general clearing of the weather, we enjoyed the good night's rest which our hard day's toil had earned.

In order that we might arrive at Wando's residence in good time on the following day, we made our start punctually at sunrise. After we had marched for half a league over open steppe, and had effected our passage over the Dyagbe, the signal was sounded for the morning halt.

Mohammed here expressed his intention of having a

preliminary conference with Wando before we definitively pitched our camp, and borrowing my revolver, as he had done before, he set out with the utmost composure, attended solely by his black body-guard, the Farookh. At the head of these he hurried away at a pace so fast that the lads who carried his arms could scarcely keep up with him. It is characteristic of the Nubians that whenever they have important transactions on hand they always move with extreme rapidity.

Within an hour Mohammed returned, perfectly content with his interview, and proceeded at once to conduct the caravan to the station allotted to it, close to the banks of the Dyagbe, and just about the distance of an arrowshot from the wall of foliage which formed the confine of the primeval forest. Taking their hatchets, the bearers entered the thickets and hewed down long stakes, with which they set to work to construct some huts, my own people meanwhile busying themselves by providing some posts and props which I required equally for the protection of my baggage from the dampness of the ground and for placing it out of the reach of white ants. I had brought some deal boards with me from Khartoom, and by putting these upon the props a convenient arrangement was made for storing in the narrowest compass a good deal of baggage. Space in my tent was necessarily very limited.

Every hand was set to work, and in a very short time a number of pretty little huts were erected with no other material than the fresh grass; and when the baggage had all been properly secured there commenced a brisk and very amicable commerce with the natives. Fine elephant-tusks were brought for sale, and found no lack of ready purchasers. Presents of cloth and beads were freely distributed, for the double purpose of putting the people into a good mood and of inducing them to disclose new resources for procuring ivory. Wando himself appeared arrayed in a large shirt of figured

calico, made with long sleeves, which he wore (in the same way as all the other native chieftains) solely out of compliment to the donor. As soon as the visitors withdrew he deemed it an attire below his dignity, and could not condescend to trick himself out in a dress which ordinarily was reserved as a kind of curiosity for his wardrobe.

The cannibal prince, of whom for some days we had been in such dread, looked a harmless mortal enough as he strolled through the camp arm-in-arm with Mohammed's officers; no doubt they had enjoyed a mutual drink to each other's health.

The kind of beads which the Niam-niam prefer wearing, when they can procure them, is that which is known in Khartoom commerce as "mandyoor," consisting of a long polyhedral prism, about as large as a bean and blue as lapis lazuli. Hardly any other kind retains any value at all. Cowries are still used as a decoration on the national costume, but the demand for them is not great, and for ten years past they have not formed at all an important item in the Khartoom traffic. Fashion extends its sway even as far as these remote wildernesses, which have their own special demand for "novelties."

As medium of exchange, nothing here was of any value except copper and iron, which never failed to be accepted in payment. English copper, which the Khartoomers take with them in long bars about three-quarters of an inch thick, is most in repute; but not unfrequently they make use of the lumps of copper which they obtain from the mines to the south of Darfoor. With any other resources for obtaining copper the inhabitants of the country through which I travelled appear to be hardly acquainted, though possibly the Congo region might, in former times, have found an outlet for its store in this direction. To provide suitable small change for their minor purchases, the expeditions to the Niam-niam always include among their bearers a certain number of smiths, who

from the larger bars and ingots fabricate rings of all sizes, from the circlet to go round the arm down to the ring just large enough to fit the finger. These rings are made from quadrangular bars, the ends of which are subsequently reduced to taper points. It may be added, by way of example, that for a finger ring a Niam-niam would give a chicken, although the copper material itself was not worth three farthings.

Here, at its fountain-head, ivory, as might naturally be expected, may be obtained in barter at a very trifling cost. On the coast of Guinea it is necessary to part with a whole host of commodities, guns, cloth, knives, looking-glasses, and what not, for a single tusk of an elephant; but a Niam-niam is contented if he can get half a bar of copper, which would not be worth more than four or five dollars. Not only, however, would there be some additional presents of cloth or beads, but the weight and transport would have to be taken into account. The prime cost here would probably be scarcely five per cent. of the value of the ivory, which fluctuating, of course, according to quality, generally, on an average, in Europe realises two or three dollars a pound; whilst on the other hand, the same purchase could not be made at the harbours upon the western coasts for much less than 80 per cent. of the gross value. Through the immense outlay which is entailed upon the Khartoom merchants by the support of so many soldiers, and, in fact, from the precarious results of the expeditions, the ultimate profit is really so moderate and it is gained at so much risk, that the ivory trade on the whole is not flourishing. But how matters could practically be mended, or how the expenses of proceeding in the lands of the Upper Nile could be diminished, I confess I have no scheme to propose. The lands are not only so remote from the coast, but they are so far away even from the navigable rivers, that they can never play an important part in the traffic of the world; nor can the railway which it is in

contemplation to construct between Khartoom and Egypt introduce any material change into the existing condition of things.

So full of bustle was our camp life that it was not till nightfall that I had an opportunity of inquiring from Mohammed what had transpired during his interview with Wando. I now learnt that the revolver he had borrowed had done him a good turn. He had hurried on in front of his escort, and had gone boldly to the chieftain to reprimand him for his equivocal behaviour; but he had no sooner entered the hut than he was encircled by a troop of Wando's satellites, who levelled their lances at him in a most threatening attitude. He felt himself a prisoner, but, undismayed, he cried out that his life should cost them a thousand lives, and, snapping the revolver, he dared them to touch him at their peril. The intimidated Niam-niam at once assumed a milder tone, and, thanks, as Mohammed said, to his temerity, everything turned out well.

We remained in Wando's camp from the 2nd to the 6th of March. The wood at Dyagbe was most luxuriant, and every day it unlocked to me new and untold treasures, which were a permanent delight. Here, too, was unfolded before my gaze the full glory of what we shall in future understand as "a gallery."

My predecessor, the Italian Piaggia, whose meagre description of the Niam-niam lands betrays, in spite of all, an acute power of observation, has designated these tracts of bank vegetation as "galleries." The expression seems to me so appropriate and significant that I cannot help wishing it might be generally adopted. I will endeavour briefly to state in what the peculiarities of these "galleries" consist.

In a way that answers precisely to the description which Dr. Livingstone in his last accounts has given of the country to the west of Lake Tanganyika, and which is not adequately accounted for either by the geological aspect of the region

or by any presumed excess of rain, there is sometimes found a numerical aggregate of springs which is beyond precedent. These springs result in a perpetual waterflow, which in the north would all be swallowed up by the thirsty soil of low and open plains, but which here in the Niam-niam country is all restrained within deep-cut channels that form, as it were, walls to confine the rippling stream. The whole country, which is nowhere less than 2000 feet above the level of the sea, is like an over-full sponge. The consequence of this is, that many plants which in the north disappear as soon as the fall of the waters deprives them of their moisture, are here found flourishing all the year round; so that all the vales and chinks through which the water makes its way are permanently adorned with a tropical luxuriance. The variety of trees and the manifold developments of the undergrowth conspire to present a spectacle charming as any that could be seen upon the coast of Guinea or in the countries which are watered by the lower Niger. But, notwithstanding all this, the vegetation altogether retains its own specific character up in the higher tracts between stream and stream, and corresponds to what we have been familiar with ever since we put our foot upon the red soil of Bongoland, being a park-like wood, of which the most conspicuous feature is the magnitude of the leaves.

I have previously had occasion to mention how a dualism of the same kind marked the vegetation of the whole country south of the Hoo, where the formation of the land first changed from the monotonous alternations between low grass flats and undulated wood-terraces. It would almost seem as if the reason for the altered law which presides over the watercourses is to be sought in the increasing elevation of the soil, and in the opening of the lower plain of the swamp-ore, which, being furrowed up with a multitude of channels, allows the unfailing supply of all the numerous springs to flow away.

Trees with immense stems, and of a height surpassing all

that we had elsewhere seen (not even excepting the palms of Egypt), here stood in masses which seemed unbounded except where at intervals some less towering forms rose gradually higher and higher beneath their shade. In the innermost recesses of these woods one would come upon an avenue like the colonnade of an Egyptian temple, veiled in the leafy shade of a triple roof above. Seen from without, they had all the appearance of impenetrable forests, but, traversed within, they opened into aisles and corridors which were musical with many a murmuring fount.

Hardly anywhere was the height of these woods less than 70 feet, and on an average it was much nearer 100; yet, viewed from without, they very often failed to present anything of that imposing sight which was always so captivating when taken from the brinks of the brooks within. In some places the sinking of the ground along which the gallery-tunnels ran would be so great that not half the wood revealed itself at all to the contiguous steppes, while in that wood (out of sight as it was) many a "gallery" might still exist.

Most of those gigantic trees, the size of the stems of which exceed any of our own venerable monarchs of the woods, belong to the class either of the *Sterculiæ* or the *Boswelliæ*, to which perhaps may be added that of the *Cæsalpiniæ*; the numerous Fig-trees, the *Artocarpeæ*, the *Euphorbiaceæ*, and the endless varieties of the *Rubiaceæ*, must be entirely excluded from that category, and few representatives of this grade belong to the region of the underwood. Amongst the plants of second and third rank there were many of the large-leaved varieties, and the figs again, as well as the *Papilionaceæ* and especially the *Rubiaceæ* had an important place to fill. There was no lack of thorny shrubberies; and the *Oncoba*, the *Phyllanthus*, the *Celastrus*, and the *Acacia ataxacantha*, cluster after cluster, were met with in abundance. Thick creepers climbed from bough to bough, the *Modecca* being the most pro-

minent of all; but the *Cissus* with its purple leaf, the *Coccinea*, the prickly *Smilax*, the *Helmiæ*, and the *Dioscoreæ* all had their part to play. Made up of these, the whole underwood spread out its ample ramifications, its green twilight made more complete by the thickness of the substance of the leaves themselves.

Down upon the very ground, again, there were masses, all but impenetrable, of plants of many and many a variety which contributed to fill up every gap that was left in this mazy labyrinth of foliage. First of all there were the extensive jungles of the *Amoma* and the *Costus* rising full fifteen feet high, and of which the rigid stems (like the haulms of the towering grass) either bar out the progress of a traveller altogether or admit him, if he venture to force his way among them, only to fall into the sloughs of muddy slime from which they grow. And then there was the marvellous world of ferns destitute indeed of stems, but running in their foliage to some twelve feet high. Boundless in the variety of the feathery articulations of their fronds, some of them seemed to perform the graceful part of throwing a veil over the treasures of the wood; and others lent a charming contrast to the general uniformity of the leafy scene. High above these there worked themselves the large slim-stemmed *Rubiaceæ* (*Coffeæ*), which by regularity of growth and symmetry of leaf appeared to imitate, and in a measure to supply the absence of, the arboraceous ferns. Of all other ferns the most singular that I observed was that which I call the elephant's ear. This I found up in trees at a height of more than 50 feet, in association with the *Angræca* and the long grey barb of the hanging *Usneæ*.

Whenever the stems of the trees failed to be thickly overgrown by some of these different ferns, they were rarely wanting in garlands of the crimson-berried pepper which twined themselves around. Far as the eye could reach it rested solely upon green which did not admit a gap. The

narrow paths that wound themselves partly through and partly around the growing thickets were formed by steps consisting of bare and protruding roots which retained the light loose soil together. Mouldering stems, thickly clad with moss, obstructed the passage at well-nigh every turn. The air was no longer that of the sunny steppe, nor that of the shady grove; it was stifling as the atmosphere of a palm-house; its temperature might vary from 70° to 80° Fahr., but it was so overloaded with an oppressive moisture exhaled by the rank foliage that the traveller could not feel otherwise than relieved to escape.

To the European lover of his garden everything at first might seem to be as artistic in its grouping as it was abundant in its luxuriance; but the screaming outcry of the birds in the branches above, the annoying activity of the insect world, and beyond all, the amazing swarms of minute ants which come showering down from every twig upon anyone who intrudes upon their haunts, detract very considerably from the enjoyment of this prodigality of nature. Yet for those who could persevere there was much to compensate in the general solemnity of the scene, for the sound of the rustling of the foliage above could scarcely penetrate the weird shades below. Butterflies gay and busy in countless swarms, with their gleaming yellow wings, gave animation to the repose of the eternal green, and made up for any deficiency of radiant bloom.

Our encampment was but comparatively a few steps away from this unbounded storehouse of creative wealth, so that with the greatest convenience I could prepare within my tent for all my explorations. That dual character of the vegetation to which I have referred offers a great advantage to the botanist in this teeming district. In the damp atmosphere of the western coasts the drying of plants is hardly ever capable of being accomplished without exposing them for a time before a fire, an operation which has generally the effect

of inducing a blackness over the specimens which necessarily very materially increases the difficulty of their being scientifically examined when they reach their destination in Europe; but here, except upon a thoroughly wet day, the plants will all dry just as readily as they would in a country where water is the reverse of abundant. When plants have been gathered and dried in the hot steamy atmosphere of Guinea, and corresponding plants have been gathered and dried as they are found in Nubia, the comparison of the two may assist in establishing what relations exist between the bank wood and the steppes of the different countries.

I had already made the acquaintance of Wando's sons, but hardly expected the honour that Wando himself paid me by visiting me in my tent. A troop of armed men composed his retinue and arranged themselves in a circle round the tent, whilst, with all deference, I made my illustrious guest the offer of my own seat which I had brought with me from the Gazelle. Wando was somewhat below a medium height, but he could show a large development of muscle, and no insignificant amount of fat. His features were of so marked and well-defined a character, that in their way they might be pronounced good, the head itself being almost perfectly round. Nothing took me more by surprise at Wando's entrance than the perfect self-possession, which might almost be called *nonchalance*, with which he took the proffered seat. Savage as he was, his composure and native dignity were those of which no European when receiving homage would need to be ashamed. Crossing his arms upon his breast, he reclined one leg upon the other, and began to throw the centre of gravity of his bulky frame so far behind the perpendicular that I was in momentary fear lest the back of my chair which creaked audibly at every movement of the Niam-niam potentate, should be faithless to its trust. It seemed to sigh beneath its burden. Wando reminded me in more than one

respect of the portly king of Ovampo, on whom Galton with some trouble forced the crown that had been brought from the theatre. With the merest apology of a piece of skin to cover him, he sat in all but absolute nakedness, revealing the exuberance of fat which clothed his every limb.

It was commonly said of Wando that he was the avowed enemy of all cannibalism. I was informed in various quarters that people from the neighbouring districts had come to him when they found themselves growing too fat, and had declared that they did not consider their lives were safe on account of the men-eaters by whom they were surrounded. But the sentiments of the chieftain did not appear to exercise much influence upon the majority of his subjects, as we only too soon became aware as we advanced farther to the south.

This visit of Wando's gave me an opportunity of which I did not omit to avail myself of entering my indignant protest against the want of hospitality with which on his part we had been received. I recounted to him by way of contrast the many acts of liberality which had been shown us by the Nubians in general, assuring him that my dogs had received more care from them than I, their master, had received from him, king though he was; to supply my dogs with meat, goats had been killed, and for myself bullocks had never been spared. Wando remonstrated, saying that he had neither one nor the other; but I made him understand that he had plenty of poultry, certainly enough, and more than enough, for me and my people. Finally, I proceeded to let him know what I thought of his hostile demonstration before our arrival; and while I spoke I dashed my fist upon the camp-table which stood before us, till the plates and drinking vessels clattered and jingled again. My personal attendants, however, Mohammed Ameen and Petherick's old servant, the travelled and experienced Riharn, knew better, after all, than

I did, how to take Wando to task. Pointing to me, they made him comprehend that he was threatened with a most certain and speedy judgment if he suffered a Frank to come to the most trifling harm. They charged him not to forget that it was a Frank he was dealing with, and that it was quite within the power of a Frank to make the earth to yawn and from every rent to give out flames that should consume his land. And as they spoke, the interpreters explained all, word for word, to his excited understanding. Intimidated to that degree of which none but a negro is capable, and only eager to avert a miserable fate, he hurried back to fulfil his promise of sending provisions without stint or delay.

Almost immediately afterwards a number of his people came teeming in, bringing not only some lean and half-fed poultry, but a lot of great black earthen pots which they laid down as offerings from their master at the opening of my tent. A revolting smell of burning oil, black soap, and putrid fish rose and stunk in the nostrils of all who were curious enough to investigate, even from a distance, the contents of the reeking jars; to those who were so venturesome as actually to peer into the vessels, there was revealed a dark-coloured stew of threads and fibres, like loosened tow floating between leather shavings and old whip-thongs. Truly it was the production of a savage, and I may say of an indigenous, cookery, such as our progenitors in their primeval forests might have prepared for themselves out of roast rhinoceros or mammoth-foot. There seemed a rebound in the lapse of time. As matter of fact, the caldrons were full of a burnt smoky *ragoût* made from the entrails of an elephant some two hundred years old, very tough and exceedingly rank. This wonderful example of nature's earliest promptings was handed first to me by the Bongo bearers, whom I at once begged to accept for themselves the dainty dish of the savages; but even the Nubians, not at all

too fastidious generally in anything which their religion permits them to eat, rejected the mess with the greatest disdain.

It had happened some years before, as one of Ghattas's companies was making their way across Wando's territories, that six Nubians were murdered in the woods by some natives who had accompanied them to the chase, professing to be their guides. As soon as the Nubians had fired away all their ammunition in shooting at their game they had no means of defence left in their power, and consequently were easily mastered. Mohammed at once sent to demand the six guns, which beyond a doubt were in the possession of Wando's people—so anxious was he to prevent the natives from becoming acquainted with the use of firearms. Wando commenced by denying his ability to meet the demand, and then resorted to procrastination; but subsequently, pressed by Mohammed, who declared that the continuance of his friendly relations must depend upon the restitution of the guns, he surrendered four of them, asserting that the others could not be found. Any further satisfaction was not to be expected, because on the one hand there was either no getting the perpetrators into custody, and on the other, even if they could be brought from their place of refuge, no one could be bribed to give any substantial evidence against them.

On the second day after our arrival at Wando's residence, attended by a considerable number of natives and a dozen soldiers, I made an excursion out for about two leagues northwards along the banks of the Dyagbe. Guereza-monkeys in merry groups were in the foliage above, but I was not fortunate enough to bring down more than a single specimen. According to the statements of my guides, who were hunters by profession, chimpanzees were numerous, but we certainly did not get a glimpse of one. Very weary with my exertions of tramping over the marshy ground I was rejoiced to bring

back into camp an ample booty in the way of botanical rarities.

During our travels I had obtained from the Niam-niam who accompanied our caravan an epithet which I never lost in all the subsequent stages of our journey. In their own dialect these people called me "Mbarik-pa," which would be equivalent to a name amongst us of "Leaf-eater." It was a designation that reminded me very vividly of my professional brother David Douglas, who fell a martyr to his devotion to Nature, and who was known amongst the North-American Indians as "the Grass-man."

My Niam-niam interpreter Gyabir, as I learnt some time afterwards, had given his friends some marvellous accounts of the way in which I was accustomed to eat whatever I found growing. He used to relate that I had a habit of dismissing my attendants and getting into a dense thicket where I imagined that I was unobserved, and that then I used with great haste to gather and devour enormous quantities of leaves, and he added that this was the way in which, one day after another, I groped after my ordinary food. Others contributed their observation that I invariably came forth from the woods with an exhilarated expression and quite a satiated look, whilst they were conscious of nothing else than the cravings of hunger. After all it was very natural; for the inspiration which is derived from contemplating Nature can elevate one far above his mortal and bodily wants.

The dominant idea which seemed to be impressed upon the natives by my botanical ardour concentrated itself upon their conviction as to the character of the country where the white man has his home. According to their belief the land wherein the white men spent their lives could show neither grass nor tree, and consisted of nothing better than sandy plain and stony flat. Those amongst them who had been carried away as slaves in the ivory expeditions and had

returned again from Khartoom had brought strange accounts of the grim desolation and utter drought of the Moslem lands over which they had passed; and what, they asked, must be the condition of the still remoter countries of the Frank, of whom they only knew that he kept the Turk supplied with cotton-stuffs and guns?

CHAPTER XII.

Poultry-market. Votive pillars and hunting-trophies. Indirect evidence of cannibalism. The chimpanzee in Central Africa. Presents of chimpanzee skulls. New style of huts. The A-Banga. Cultivation of manioc in Central Africa. The Treculia. Cam-wood and muscat nuts. Conflict with natives. Shooting-match and sham fight. Magic lucifers. Mutual interchange of blood. Botanical excursion interrupted. Gyabir wounded. Modes of expressing pain. Female slaves captured. Giant lichens. Tree-termites. Monbuttoo frontier. Reception by Nembey. Northern limit of the oil-palm. Imaginary alarm. Unexpected arrival of Khartoomers. Visit of Bongwa and his wife. Cattle of the Maogoo. Cultivation of the sugar-cane. Interview with Izingerria. Arrival at the Welle. Condition of the Welle. Relations of the stream. Crossing the river. Monbuttoo canoes. New impressions of the heart of Africa. Arrival at Munza's residence.

At sunrise, on the 6th of March, we took our departure from the abode of Wando. For our security on the way, the caravan was attended by a number of guides which the chieftain had placed at our disposal. Just before starting, the intelligence arrived of the death of Nduppo, the alienated and hostile brother of Wando. A party of armed men had been despatched by Wando, and after a short conflict they had killed the enemy. Nduppo's wives and children had taken refuge in Mohammed's Seriba, where they met with a hospitable reception and were provided with the residence and provisions that were necessary for their support.

According to a custom which is generally recognised in Central Africa, whenever a caravan mistakes its way and is obliged to retrace its steps and return to a road from which it has deviated, a bough is thrown across the wrong path and a furrow is scratched in the ground by means of the feet, so

that no succeeding caravans may fall into the same error. This duty is entrusted to the people accompanying the standard-bearer in the rear.

The route of the first day led us along the right bank of the Dyagbe, past Wando's tall conical huts, and through a gallery of picturesque wood scenery. Having forded the stream which, plentifully supplied with water, resolved itself into several channels, we rested on the farther side amidst the outlying homesteads of the district. The startled inmates made a momentary escape; but soon recovered from their alarm, and returning to their dwellings commenced a brisk business in *selling* poultry all along our line. The men alone, however, brought their fowls, tied up in bundles, to the market; the women kept themselves quite aloof. After a brook of smaller dimensions had been crossed and some more groups of huts had been left behind, the caravan arrived at a stream of considerable magnitude known as the Billwey, but which so much resembled the Dyagbe in the shady character of its banks that it might very easily be mistaken for it. Then ensued two of the "gallery" paths, the first being quite small, the other somewhat larger and known by the name of Mono. The district still seemed to be fairly populous, and from all sides we were met by people who came to us partly to offer their services as guides, and partly to learn what particulars they could about the intentions of the caravan. There was a coming and going which a European might compare to the bustle of a general holiday at home.

Without stopping, however, we continued our progress, and by noon we reached a brook called Diamvonoo, one of the gallery streams, of which the banks were enclosed by dwellings. Here we halted close to the huts of the superintendent of the place.

The Niam-niam residences seem never to fail in having some posts which the natives erect for the purpose of displaying, in proof of their bravery, whatever trophies of

I. NIAM-NIAM HAMLET ON THE DIAMVONOO. p. 517.

success they have gained either in hunting or in war. To this practice, as established on the Diamvonoo, my osteological collection is indebted for some considerable additions. Attached to the projections of these memorial posts were skulls of antelopes of many a species, skulls of little monkeys and of great baboons, skulls of wild boars and of chimpanzees, and I must not hesitate to add, skulls of men! These were in some cases quite entire, whilst in others they were mere fragments. They were fastened to the erections like the presents on a Christmas-tree, but instead of being gifts for children, they were treasures for the comparative anatomist. Too decisive to be misunderstood were the evidences of the propensity to cannibalism which met our astonished gaze. Close to the huts, amongst the piles of refuse, were human bones, which bore the unquestionable tokens of having been subjected to the hatchet or the knife; and all around upon the branches of the neighbouring trees were hanging human feet and hands more than half shrivelled into a skeleton condition, but being as yet only partially dry, and imperfectly sheltered by the leaves, they polluted the atmosphere with a revolting and intolerable stench. The prospect was not inviting, and the asylum offered to travellers was far from tempting; but we did not suffer ourselves to be discouraged, and made up our minds to be as comfortable as we could in our little huts.

Without loss of time I betook myself naturally to the chase for trophies, Mohammed entering with so much zeal into my pursuit after the skulls of some of the chimpanzees, that he clambered up one of the votive pillars. This drew upon us the eyes of the astonished natives, and their amazement seemed to be especially directed to the circumstance of our taking so much trouble into our own hands. "You have plenty of slaves," they said, "you are chieftains and have authority; how is it that you are not ashamed to work for yourselves in the way you do?" This, probably, was spoken

in derision, or probably in a measure as a reproach to us for appropriating what did not belong to us. However, I put on the air of munificence, and set matters all right by a prodigal distribution of copper rings.

Taking into account the large number of skulls of chimpanzees, more or less perfect, which I saw in the hamlets on the Diamvonoo, I am sure that I am quite justified in my impression that this spot must be one of the centres from which these creatures circulate their kind. Upon the Western African coasts the prevalence of the chimpanzee breed is very considerable, extending from the Gambia down to Benguela. But in the interior, on the other hand, the haunt of the chimpanzee hitherto has been supposed to be limited to the country of the Niam-niam. Previous to my arrival the Khartoom people had been the means of securing some defective skins, which were sent to various museums, and these were quite sufficient to confirm the fact of the existence of chimpanzees in that quarter. But so great was the variety in age and kind, so marked the difference in these beasts according as they came from one district or another, that a whole series, it appeared, of varying species had to be distinguished and arranged by means of material which was totally inadequate for scientific classification. Nearly all the specimens at hand were those of very young animals, and no mammal is known which as it grows older is subject to more decided changes in its external appearance than the anthropomorphic ape.

I am not speaking of Du Chaillu's gorilla. This largest of all apes is sufficiently known, and its specific stability is no longer a matter of doubt. Its range, however, is apparently very limited, as hitherto it has only been found in the delta of the Ogowai.

On the other hand the chimpanzee, as it exists far and wide in the west of Africa, has, in consequence of its individual and collective features, been divided into a long series

of supposed species, varieties, and races, about which the most skilled investigators in this branch of natural history are by no means agreed. In one point they seem to be unanimous, and all concur in recognising the *Troglodytes niger*, E. Geoffr., as the progenitor or the normal type of this series of anthropomorphic apes.

The chimpanzee of Central Africa, to judge from the specimens that have found their way to European museums, differs in many respects from the true *Troglodytes niger*, E. Geoffr., and may be accounted as a separate race which in the lapse of time has developed itself, and adapted its condition to subsistence in far out-lying regions. Professor Giglioli, of Florence has classified it as a subsidiary kind or sub-species, to which he has assigned my own name, because, in 1866, I was the first to bring any definite information about it. In a work* elaborated with the utmost care he has collected every detail that science offered to his hand. According to Giglioli the chimpanzee of the Niam-niam countries was distinguished from the *Troglodytes niger* of Western Africa by the large capacity of its brain chamber, which he thought could very probably not be matched by any other species. We are indebted to Professor R. Hartmann, of Berlin, for a monograph † which has collected into one view, and may be said to exhaust, all the material which has hitherto been brought to bear upon this topic. From a comparison of a very large number of specimens of very various origin, he has come to the conclusion that the Niam-niam chimpanzee has no such marked distinction as to isolate it in a systematic sense, and that notwithstanding some subordinate characteristics of race, it must still be reckoned as one amongst the many forms of the *Troglodytes niger*.

In modern times there are no animals in creation which

* 'Troglodytes Schweinfurthii Gigl. in Studii Craniologici sui Cimpanze.' Genova, 1872.

† Reichert's and Du Bois Raymond's 'Archiv.' Berlin, 1872.

have attracted a larger amount of attention from the scientific student of nature, than these great quadrumani, which are stamped with such singular resemblance to the human form as to have justified the epithet of anthropomorphic. The most distinguished zoologists and anatomists have devoted to them their best and undivided attention, and their industry has resulted in the publication of splendid works in illustration of their studies. The labours of Giglioli and Hartmann indicate a still further advance in these strivings after truth. These inquiries cannot fail to be as supremely interesting to man, as the crown of creation, as the prospect of the ultimate solution of the problems of ethnography still hidden in the heart of the continent of Africa, must be to the civilised nations of Europe. But all investigation at present only leads human intelligence to a confession of its insufficiency; and nowhere is caution more to be advocated, nowhere is premature judgment more to be deprecated, than in the attempt to bridge over the mysterious chasm which separates man and beast.

Justly enough has Hartmann expressed his indignation against those ephemeral writers and those *dilettanti*, who, incapable of scientific research and unfurnished with scientific material, have ventured to handle the topic of the "anthropomorphic apes." These empty theorists, when they circulate their baseless, or at least their unripe, hypotheses, may perchance persuade themselves that they have mastered the doctrine either of the elevation of the ape or the deterioration of man; but in reality they have done nothing but aggravate the bewilderment which already had turned the heads of a half-wise generation.

It was getting well onwards towards night, and by the red glare of the pitch-torch which is the invariable resource for lighting the Niam-niam huts, I was getting my supper, in the simplicity of the primitive times of creation, off sweetened plantains and tapioca, when I was interrupted by

a visit from some of the natives who lived close at hand. They had come to dispose of a collection of fine skulls of the chimpanzee, and I effected the purchase by means of some large copper rings. The people told me of the abundance of these creatures in the adjacent woods, and related a number of the adventures which had befallen them in their arduous attempts to capture them: they promised, moreover, to bring me some further contributions for my collection, but unfortunately I could not wait to receive them; we could not prolong our stay because of the scarcity of provisions, and we had to start betimes on the following morning. Altogether I made an addition of about a dozen skulls to what I had previously secured, but many interesting fragments I much regretted being obliged to leave behind, having no alternative on account of my limited means of transport.

It was not my good fortune to witness a chimpanzee hunt. This is always an arduous undertaking, involving many difficulties. According to the statements of the Niamniam themselves the chase requires a party of twenty or thirty resolute hunters, who have to ascend the trees, which are some eighty feet high, and to clamber after the agile and crafty brutes until they can drive them into the snares prepared beforehand. Once entangled in a net, the beasts are without much further difficulty killed by means of spears. However, in some cases they will defend themselves savagely and with all the fury of despair. Driven by the hunters into a corner, they were said to wrest the lances from the men's hands and to make good use of them against the adversary. Nothing was more to be dreaded than being bitten by their tremendous fangs, or getting into the grasp of their powerful arms. Just as in the woods of the west, all manner of stories were rife as to how they had carried off young girls, and how they defended their plunder, and how they constructed wonderful nests upon the topmost boughs of the trees —all these tales, of course, being but the purest fabrications.

Amongst the Niam-niam, the chimpanzee is called "Ranya," or "Manjarooma;" in the Arabic of the Soudan, where long ago its existence seems to have been known, it was included in the general name of "Ba-alim." The life which the Ranya leads is very much like what is led by the ourang-outang in Borneo, and is spent almost entirely in the trees, the woods on the river-banks being the chief resort of the animals. But in the populous Monbuttoo country, where the woodlands have been thinned to permit the extensive cultivation of plantains, the chimpanzees exhibit a great fear of man, and pass their existence in comparative solitariness. Like the gorillas, they are not found in herds, but either in pairs or even quite alone, and it is only the young which occasionally may be seen in groups.

For three leagues we advanced on the next day towards the S.S.W.; and this was the general direction, with little variation, by which we continued our progress to the Monbuttoo. During this short interval we crossed no less than five water-brooks, each of them bounded by its "galleries," and halted at last upon the right bank of a sixth which was named the Assika. It was close to the quarters of a chief whose name was Kollo. With the exception of a slight elevation lying to the right, the whole surface of the land between the streams was level steppe. The borders of these streams were all well-populated; the soil was entirely under cultivation, and appeared to be very productive. We found ourselves here amidst a tribe, differing widely in habits and dialect from the Niam-niam, and which bore the semblance of being a transition population allied to the Monbuttoo who occupied the districts in our front.

This tribe is distinguished by the name of the A-Banga. They are said to have come across the wide desert, which bounds the territories of the two nations, and quite recently to have migrated into the lands of the Niam-niam, submitting themselves voluntarily to the sway of Wando. A very

similar migration, resulting in the partial blending of the two people, seems to have occurred in the west, where the A-Madi,* driven out by over-population, their product of roots and plantains, which they obtained without toil, being inadequate for their support, resorted to the Gangarra hills of Indimma. Some chance few of the A-Madi were found intermixed with the A-Banga. Both of these could be thoroughly identified with the Monbuttoo by their habits and mode of life, but with regard to dialect they would seem to have been much influenced by their intermixture with the bordering population of the Niam-niam. The last home which they occupied as a clan was the populous province which the Monbuttoo king Munza now possesses to the north of the Welle. As the greater part of the A-Banga are quite capable of speaking the Zandey (or Niam-niam) dialect, I had no difficulty by the aid of my interpreters in holding conversation with them; beyond the Welle, however, there were very few with whom they were able to converse.

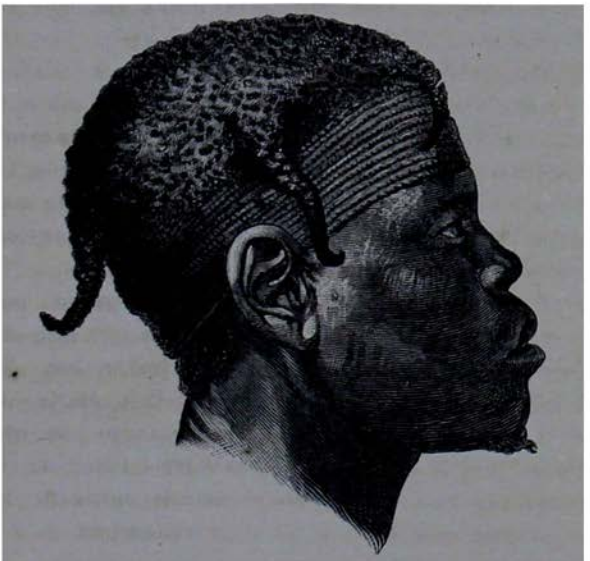
The first hamlets of the A-Banga which we entered, made it at once clear that they adopted quite a different style of building their huts to what we had already seen. The conical form of the roofs, employed as it is in nearly every other region of Central Africa, here began to give place to the roof with a gable end which is universal farther south. The square huts themselves were sometimes constructed with posts and left open like sheds, and were sometimes enclosed by four walls.

The dress and war equipment of the A-Banga are the same as those of the Monbuttoo. The ears of both sexes are pierced so that a good thick stick can easily be run through the aperture, and for this purpose the concave portion of the ear is cut out. As a consequence of this custom both the

* The A-Madi must not be confounded with the Madi of the Mittoo, nor with the Madi south of Gondokoro. In the native dialect "a" is only a plural form: *e.g.*, "ango" means a dog; "a-ango," dogs.

A-Banga and the Monbuttoo have acquired from the Nubians the name of the Gurrugurroo (derived from the word gurgur, which signifies "bored") to distinguish them from the Niam-niam, which is their term to denote all cannibals. The A-Banga and Monbuttoo also practise circumcision, whilst the Niam-niam abstain entirely from any mutilation of the body.

Turned up into a high chignon, the hair is worn by the women of the A-Banga without any head-covering, the men commonly adopting the mode of the Niam-niam, who wear a



An A-Banga.

straw hat without a brim. Some of the men, however, as in the accompanying portrait, make a compromise between the Monbuttoo and Niam-niam fashion, wearing the hair in the Monbuttoo style about the forehead and temples, and discarding the chignon for the tufts worn by the Niam-niam. The small apron which they wore was not, as with the Niam-niam, made of skin, but from the bark of the Rokko fig-tree.

The shields did not consist of the oval wicker-work of rotang, but were four-cornered tables of wood of a length sufficient to protect the entire body. In place of the trumbash and Niam-niam lance, they carried the lances, scimitars, and bows and arrows of the Monbuttoo. The women go all but entirely naked, wearing nothing but a fragment of the bark of the fig-tree. Just under the arms, in the same way as the Monbuttoo women, they bind a stout and broad strip of some woven material, which when they sit upon their benches and low stools hangs across their lap, and serves as well for a girth in which to carry their little children.

In this intermediate district between the corn-lands and the lands in which roots or fruits were cultivated, the fertility was very wonderful, and the agricultural labour that was applied was very great. Besides eleusine and maize there were many patches of penicillaria: amongst earth-products I observed yams, helmia, colocasia, manioc, and the sweet-potato; amongst various other leguminous plants there grew the catyang or rawan-bean (*Vigna sinensis*), the horse-bean (*Canavalia*) the voandzeia, and the *Phasæolus lunatus*; the oily fruits included earth-nuts, sesame, and hyptis; whilst there still remained room for Virginian tobacco, for the sugar-cane, for the Rokko fig-tree, and for large numbers of plantations of plantains (*Musa sapientium*).

Manioc plays an important part amongst the plants cultivated in this region, both on account of the yield it gives and the small amount of labour required in its cultivation. Here, as in Guiana and Brazil, it seems to delight in a soil that is rather moist and somewhat shaded, and accordingly the position which is usually chosen for its culture is just on the border of the "galleries" on the open steppe. The end of April, at the real commencement of the rainy season, is the best time for planting it. The plant is of a leafy growth, it has hardly any wood, and attains a height varying from three to six feet; the mode of planting it consists simply of

breaking off some pieces about a span long, and burying them in the soil which has been superficially broken up. It is quite unnecessary to trench it, since the soil is naturally very light and loose, being composed principally of rotten leaves. As the manioc is a year and a half or two years before it produces strong tubers, it is customary to use the ground between the rows, by planting, as is done elsewhere, various other crops, either of maize, colocasia, or yams. One great advantage connected with the manioc is the length of time for which the tubers may be left in the earth after their full development: provided only the ants can be kept from them, they will remain in good condition for two or three years; consequently they do not require to be housed, and their culture admits of leaving the granaries free for other provisions, in a way quite different from most tubers, which would soon perish if suffered to remain in the wet soil.

The gathering is nearly as simple a process as the planting. Each single plant is pulled away from the loose earth, and the tubers are allowed to remain attached. In quality and size they differ very materially. As the death of our poor Bongo bearer had testified, some of the varieties when eaten in a crude form are most poisonous, and even when boiled they are very injurious unless the fibrous fringes have been removed from the hearts. Scientific analysis has shown that they contain a certain proportion of prussic acid, and there is no doubt that their leaves when bruised emit the decided odour of bitter almonds. The unwholesome kinds are generally of small growth, and as a rule are of very woody texture. The finer and nutritious sorts grow as large as a man's arm, and being very tender may be eaten with no more misgiving than the camanioc of Brazil, which is the form of the vegetable for which a great partiality is shown by the Monbuttoo south of the Welle.

No one can have travelled much in the tropics without being tolerably acquainted with the mode commonly prac-

tised of dressing the manioc. I will therefore only pause to mention that the method followed here of getting rid of the poisonous matter does not consist so much in expressing the juices as in cutting up the tubers into pieces, and allowing them to remain in water for more than four-and-twenty hours; the result is that they get a very tainted flavour, which, however, disappears again in the process of drying. A long boiling finally prepares the manioc for eating. The yield of starch, which is known as South American tapioca, is estimated as one third of the weight of the fresh tubers.

Very probably, I should think, manioc has found its way to this extreme limit of its culture from Angola, by means of the intercourse of the people with the states under the dominion of Miwata Yamvo, many of whose customs appear to have been transferred to the Monbuttoo. But in all the northern parts of the Nile region the cultivation of manioc is still unknown, and although it has made its way into nearly all countries on the coasts within the tropics, it has not advanced towards Egypt as far as Nubia, or towards Arabia as far as Abyssinia.

Thoroughly authenticated, meanwhile, stands the fact that it was originally planted by the Portuguese upon the western coasts, and first of all in Angola. An inference may very fairly be deduced that in this way various other plants, such as maize and tobacco, were introduced into Africa, and only became naturalised at some date subsequent to the discovery of America.

After scrutinising this district as fully as I could, I was surprised never to find a single instance of the existence of the *Carica papaya*, which has now for so long become indigenous to all the maritime tropical countries of the world. Barth speaks of its abundance in the states of Haussa, and other travellers in the tropics have made frequent mention of its growth, but I do not remember finding it in Egypt except as a garden curiosity, while in Nubia and Abyssinia I never met

with it at all. I was the first to introduce tomatoes into the district of the Gazelle, and I have no doubt that ere long they will be extensively grown even in the most central localities of Africa. Cultivated so easily as they are, they nevertheless seem to be utterly wanting throughout all the wild districts that have been hitherto explored in the southern portion of the continent.

On the 8th of March some ivory business on the part of Mohammed entailed the break of a day in our continued march. The respite afforded me an opportunity, which I readily embraced, of making a botanising trip to the rich galleries of the woods on the Assika. Bribed by a few copper rings, some natives willingly came with me and were of infinite service in getting me the produce of some gigantic trees which otherwise had been quite inaccessible. Amongst these trees I may specially mention a Treculia, eighty feet high, known as the "pushyoh," one of the family of the Artocarpeæ. The great globular fruit of this was larger than my head, and seemed to realise the wish of the peasant in the fable where he longed for a tree which would grow pumpkins. I stood and gazed with astonishment at the A-Banga, who seemed to have all the nimbleness of monkeys. By taking hold of the boughs of the smaller trees, and bending them down sideways, and tearing down the long rope-like creepers, they contrived to climb the tallest and the smoothest stems. Some of the trees were ten feet in diameter at the base, and had a bark without a wrinkle; not unfrequently they ran up to a height of some forty feet without throwing out a single branch, standing, as it were, like the columns of a thousand years in the piazzas of the Eternal City.

I had made some chain-shot, but neither by means of this nor by the use of my heaviest single bullets could I succeed in getting any specimens of the fruit which grew on the tops of the tallest trees; my ordinary shot, however, sufficed to bring down some detached leaves, from the examination of

which I was able to form an opinion as to the true scientific character of these giants of the wood. My proceedings appeared to confirm the impression which the natives began to form that I must be a leaf-eater.

Here on the Assika I found a kind of muscat-nut (*Myristica*), and here too I gathered the first examples I had seen of the West African cam-wood (*Pterolobium sandalinoides*), which after it has been pulverised is commonly used as a favourite rouge for the skin of the Niam-niam and Monbuttoo men. The women, in both districts alike, are accustomed to stain themselves by preference with a black dye that is extracted from the pulp of the Gardenia fruit, known as blippo. Here, likewise, I again saw another of the notorious towering trees of Africa, the mulberry-tree of Angola, which Welwitsch has asserted is known to grow to a height of 130 feet.

Reverting for a moment to what had transpired before, I may mention that, on the preceding day, we had had our first disagreement with the native population. Just before we reached the Assika we were about to halt for a few minutes' rest, when, although our caravan was accompanied by Kollo and Bakinda, the chiefs of the district through which we were pushing, the owner of the land came and began to inveigh against us with the most abusive language, and, brandishing his spear in defiance, opposed our intention to advance. He wanted to know what right the Turks had to come spying out his place, and declared that he would not submit to have them defile any of his quarters. An outbreak seemed imminent; a mischievous combination was only too likely, when, acting on Kollo's advice, Mohammed managed to quiet the uproar. He proceeded without further parley to set light to one of the straw huts which was being used as a granary; and it would be impossible to exaggerate the fright and amazement of the natives when they saw him take the flaming fire out of his hand. One single lucifer match

had worked a miracle. There was no need of further measures of reprisal for our protection; when we reached the hamlets on the Assika we found the natives quite amenable to our wishes, and ready to permit us to instal ourselves amidst their dwellings.

In the evening Mohammed established a shooting match. The natives had never been made familiar with the effect of our firearms, regarding them only as clumsy lances, or, as they called them, great "iron sticks," and Mohammed felt it was desirable to inspire them with a proper respect for the weapons. Selecting one of the thickest of the wooden gates that, according to custom, swung in front of the huts, he set it up for a target, and the general astonishment was unbounded when it was discovered that out of fifty balls at a hundred paces, at least ten had gone clean through the wood. The Bongo bearers were then put through an exercise of feigning an attack. With wild outcry, and still wilder boundings and jumpings, they rushed upon their imaginary foe, representing, in their way, the light cavalry dashing in after the prelude of the roar of the artillery. Then, to complete the illusion of the spectacle, they seized huge clods of earth and great clumps of grass, and so returned, a picture of troops laden with spoil, to the position from which they had started. This was but a sham fight; but a few weeks later, and the scene had to be re-enacted in earnest.

The next movement of the caravan was towards the west. Twice there were some brooks to cross, and after half a league we halted by the Yuroo. We were now in a country with a large population, the whole district being called Nabanda Yuroo, or the "villages of the Yuroo," as the names of the streams in this region always give their designation to the land. The stream was shadowed in the usual way by the thickly developed growth of the gallery foliage, and took a curve in the form of a horse-shoe. Within the

bend were scattered the farmsteads surrounded by large groves of plantains of which the ripe fruit had been already housed. The preparations that were set on foot towards forming a camp without making use of the existing huts either for the shelter of our baggage or for the reception of the superiors, demonstrated at once that a residence here for some days was certainly intended. The pretext alleged for the stay was to allow the Mohammedans to solemnise the anniversary of their new year. The issue, however, did not answer to the expectation.

I had here to exhibit myself to a larger number of curious eyes than usual; but I was able to obtain the measurements of the skulls of some of the A-Banga, whilst others were immortalised in my sketch-book. I had also to provide for the entertainment of the people who came to visit me, and in this respect was greatly assisted by my matches, as the marvel of my being able to produce fire at my pleasure was an inexhaustible source of interest. If ever I handed over a lucifer and allowed them to light it themselves, their rapture surpassed all bounds; they never failed to consider that the power of producing flames resided in me, but their astonishment was very greatly increased when they discovered that the faculty could be extended to themselves. Giving the white man credit for being able to procure fire or rain at his own free-will, they looked upon the performances as miracles unparalleled since the dawn of creation. For myself, I sat composedly apart, as though invested with some mysterious charm; but to say the truth, I was rather bored by this conjuring, which was a stale excitement to me, as it had now entered upon its second year of performance. Still the wonder of the Africans seemed never to cease, and they did not flag in their delight at the instantaneous flame.

The method of obtaining fire, practised alike by the natives of the Nile lands, and of the adjacent country in the

Welle system, consists simply in rubbing together two hard sticks at right angles to one another till a spark is emitted. The hard twigs of the *Anona senegalensis* are usually selected for the purpose. Underneath them is placed either a stone or something upon which a little pile of embers has been laid; the friction of the upper piece of wood wears a hole in the lower, and soon a spark is caught by the ashes, and is fanned into a flame with some dry grass, which is swung and fro to cause a draught, the whole proceeding being to marvel which might well-nigh eclipse the magic of my lucifer matches.

As we were now expecting a forced campaign of two days through the wilderness, on the confines my servants had to apply their attention to the provision of adequate supplies, as whatever we required would have to be carried with us. To accomplish our plan satisfactorily we were obliged to contract a treaty offensive and defensive with the natives, and nothing would suffice for this but a mutual interchange of blood. The circumstance led me for the first time to become a witness of this barbarous, but truly African custom. The words of the pledge are emphatic: "In peace we will hold together; in war we will be a mutual defence." Osman, one of my people who had come from Berber, being a novice in the ranks of the Niam-niam campaigners, became one of the most enthusiastic adherents to this pledge. In vain I represented to him the unlawfulness of his conduct from a Mohammedan point of view; I threatened that for the future he should be called a heretic and an unbeliever, as bad as a Kaffir; but all to no purpose: he became a blood-drinker by profession, and so obtained from me whatever copper rings and beads were necessary for cementing the bonds of the treaty.

The following day was devoted entirely to exploring the sylvan flora around; to my heart's desire could I now wander amidst the thickets on the Yuroo, which would have been deemed inaccessible to any one but a plant-hunter.

In the mould formed by the leaves which had decayed beside the stream that parted itself into many a vein, I came across a number of drums, stools, and other specimens of wood-work which the natives had buried in the mud, in order to give them a permanent blackness. This too is the way in which they prepare the reeds of which they weave their shields and matting. The process of rapid superficial humifaction which takes place here, is to be attributed doubtless to the temperature being so much higher than in the temperate zones, where a corresponding degree of decomposition would be the work of years.

Whilst botanising on the Assika we had more than once been taken by surprise at arrows from some unknown hand having fallen very near us. To bend down to pluck a remarkable plant, and to take up some whistling arrow instead, is not a common experience, even in Africa. The hostile and defiant attitude of the natives was too plainly revealed to us, when on the 11th of March the elder of my Niam-niam attendants, Gyabir, was shot in the muscle of his arm. Shrieking aloud in alarm and agony, he flung down my valuable rifle, and betook himself to flight. So dense was the thicket that I knew nothing of the disaster till my other attendants came running up, and terror-stricken began to shout, "They are coming! they are coming!" After this we hurried back to the camp. I was very deeply concerned at the supposed loss of my breech-loader, which I was accustomed to call my "cook," so serviceable had it been day after day, in bringing down guinea-fowl and francolins for my table. By good fortune, however, one of the Bongo folk had caught sight of the weapon, and soon brought it back to me safe and sound.

Several of the Bongo bearers had also returned wounded more or less by these insidious arrows; none of them were very severely injured, but they came back howling in alarm. Each race seemed to have its own way of giving vent to

expressions of woe. The Niam-niam outcry for pain that was sudden, was a sharp "Ow! ow!" but for a continued pain it consisted of a prolonged "Akonn! akonn!" The Bongo cry was "Aoh! aoh!"—that of the Dyoor was "Awai! awai!" For suffering of every degree the Monbuttoo seem to have a word peculiar to themselves, and on every occasion, however trivial, for a mere push or fall, they will break out into a long-drawn wail of "Nangway! nangway!"

The arrows of the A-Banga and the Monbuttoo differ from those of other tribes by being provided at the extremity of the shaft with two wings, which are made either of hairs from the tail of the genet, or quite as often of bits of plantain-leaves. In their points they correspond with those of the Mittoo-Madi. The points are generally iron, but occasionally they are made of wood which is almost as hard as iron. The shafts consist of the firm reedy steppe-grass, and are of about the thickness of a common lead-pencil. By a cruel refinement of skill which might almost be styled diabolical, they contrive to place one of the joints of the reed just below the barbs, with the design that the arrow should break off short as soon as it has inflicted the wound, making it a very difficult matter to extract the barbs from the flesh. The usual method of extracting a lance-head is to take a knife and make a sufficiently large incision in the wounded muscle for the barbs to be withdrawn; but, in fact, the result generally is that very jagged and troublesome wounds are inflicted.

No little excitement was stirred up in our encampment when Gyabir came back wounded. I set to work and extracted the arrow by breaking off the shaft, and drawing the head out on the side of the arm opposite to that at which it had entered. All the evening, however, I was too much occupied in my own pursuits to have time to devote to the consultations of the Nubians. As night was drawing on there

was a fresh uproar, and the shrieks of women in alarm revealed that some Job's post of evil tidings had arrived. Three female slaves had gone to the banks of the Yuroo to fetch water for the camp, and had been discovered fatally wounded, whilst six others had disappeared and had evidently fallen into the hands of the A-Banga. A state of war then was manifestly declared; at once a fresh supply of cartridges was distributed to the soldiers, the sentinel-watches were made doubly strong, and a detachment of Farookh was told off and ordered to keep vigilant guard all night. Water for the night was indispensable, and in order to fetch it a number of women went down to the water-side, carrying torches in their hands, and under the protection of a strong escort who fired frequent shots into the bushes.

Mohammed proceeded on the following morning to distribute his force into several companies, and as soon as it was daylight sent them roaming over the environs, commissioned, if possible, to obtain some hostages that might be exchanged for the missing slaves. They found, however, that all the farmsteads had been deserted by their inhabitants, and without accomplishing their purpose they returned to the camp. All the huts and the plantain-groves were spared, but only provisionally. In the event of a thorough rupture the natives in the immediate neighbourhood had more to fear than the remoter people from the indiscriminate revenge of the Nubians, and it was hoped that their influence would avail to secure that the stolen women should be restored. In fact, several of the local chiefs did come in the middle of the day for the purpose of offering some explanation to Mohammed. Mohammed made them clearly understand that unless by nightfall the captives were delivered up every farm and every crop in the district should stand in flames. The warning had its due effect; the restitution was promptly made, and left us free and contented to prepare for our farther progress towards the south.

Ready enough we were next morning to turn our backs upon the inhospitable quarters, and to postpone a regular warfare until the date of our return, when a conflict seemed inevitable, and we should have but a hostile reception to expect. The Bongo bearers had meanwhile taken good care to replenish their stock of provisions by laying hands on every granary they could, so as to be prepared for the transit over the desert-country which lay between us and the friendly territory of the Monbuttoo. We first passed over the Yuroo, and shortly afterwards we crossed two other steams which flowed into it, each full of water and with well-wooded banks. After marching on for about two hours till we had passed the last cultivated fields of the A-Banga, we arrived at a rivulet which watered an open steppe, and finding some detached and spreading fig-trees, we made a halt and took our morning meal. A very obvious sinking of the land had ensued since our passage over the previous streams, the surface of the soil around being once more marked by undulations.

Onward for two leagues we went over a level steppe which was all but void of trees, occasionally passing over some sandy eminences which had all the appearance of being the remnants of gneiss rocks decomposed by the lapse of time. Comparatively a short period will suffice to obliterate these remnants of rock as the formation of the superficial iron-stone goes on. Altogether the region through which we were passing now presented an aspect very different from the land we were leaving behind, which had been very profusely intersected by a very network of intricate watercourses all bounded by abundant woods. Here the streams all irregular and undefined, twisted their ambiguous way through marshy meadows, their banks being totally destitute of woods; some occasional clumps of Scitaminea being the only plants to be seen. They had to be crossed as best we could at the spots where the herds of buffaloes had trodden down the slime into something of solidity; but the black water was

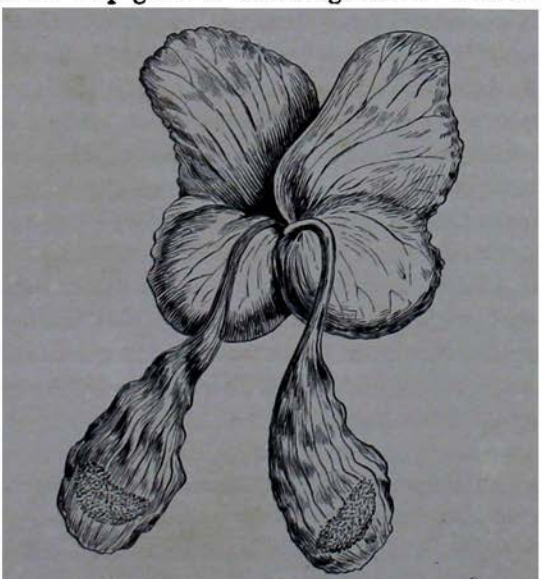
frequently as high as our necks, whilst the mud beneath our feet seemed to have no bottom. Numerous large frogs and a quantity of land crabs (*Telphusa Aubryi*) were wallowing in the half-dry pools on the banks.

Especial precaution had to be taken here to protect the baggage and to convey it across the swamps without injury. We had successfully accomplished the passage of two of these difficult fords, when the tokens of a gathering storm made us halt for the night upon the banks of a third before we could venture to proceed. As expeditiously as possible a tent was erected, into which as much baggage was stowed as it could contain, but it was far from being spacious enough to shelter the whole, so that for the greater part of the night the Nubians had to protect it by piling over it great ricks of grass. An entire deficiency of wood made it impossible to extemporise either huts or sheds. The tumultuous confusion, the shouting and the running, the rescuing here, the escaping there, and all amidst the crashing thunder of the tropics, and in a torrent of rain that fell as though the very sluices of the sky were open, conspired to form a study from which a painter might conceive a picture of the Deluge. The meadow-stream by which we were compelled to pass this luckless night had a direction that was easterly, and therefore contrary to that of the rivers we had previously passed; it flowed to join the Kahpily which may be described as a river of the second magnitude, and which unites its dashing flood with the more northerly of the two sources of the Welle, the Keebaly and the Gadda.

Frightfully hungry after the disturbed vigil of the night, but yet still fasting, we proceeded at dawn to take the mud-bath which crossing the stream involved. Some Bongo who were adepts in swimming had to go in front, and convey great masses of grass and Phrynia, which they let down in the deepest parts so as to cover the sinking bottom. Going on in the same southerly direction as on the day before, we passed

along the sunken ground, and after a while came to a brook which once again was shaded by luxuriant gallery-woods. The path that led through the thickets down to the main arm of the stream had been for so many feet encroached upon by the water, which rose high in consequence of its contracted channel, that the only means of progress was either along the unstable trunks of fallen trees, or through puddles in which it was hard to preserve one's equilibrium. The narrow rift was cut out from the entanglement of foliage, creepers, roots, and branches, as neatly and smoothly as though it had been trimmed by a knife.

Never before had I seen such wonderful masses of lichens, of which the long grey garlands hung down in striking contrast to the deep green of the foliage above. Just like the



Platycerium Elephantotis, Schweinf. One-eighth of natural size.

"barba espanola" of the forests of the Missisippi, a gigantic form of our *Usnea florida* here adorned every tree. But a

decoration stranger than all was afforded by the Platycerium, which projected in couples, like elephant's ears, from the branches of the trees; it is one of the most characteristic of all the gallery-flora of the region. Another species of the genus which I had observed in other parts, the *Platycerium stemmaria*, with its bifurcate leaves, here too finds a conspicuous place.

In these ancient woods, however, there is nothing that could more attract the attention of the naturalist than the wonders of the world of white ants. So assiduous are they in their industry and so inexplicable in their work, that their proceedings might well-nigh tempt a scientific student to take up his permanent abode near their haunts. They construct their nests in a shape not dissimilar to wine-casks, out of thousands and thousands of leaves, which they cement together with a slimy clay, using a strong bough for the axis of the whole, so that the entire fabric is suspended at a giddy height.

This species of white ant (*Termes arborum*) had been already observed by Smeathman in Western Africa. They partition their buildings by means of wood-shavings and bits of bark, and in the same way as the forest-ants they make several stories, and set apart nurseries and chambers for the young.

Just as the bottle-gourd of the primeval wilderness offered to a primitive people the first models for their earthenware, so have the structures which the ants contrive from leaves furnished the natives of Central Africa with the general design of all their basket-work. Already I have referred to the corn-baskets of the Bongo as one of the earliest illustrations of the fact that their weaving is but a faithful copy of the building of the ants.

Coming next to a tract of bushwood, and then crossing two more galleries, on which was displayed all the wild beauty of the virgin forest, we arrived about midday at the stream which marks the boundary of the kingdom to which we were directing our way. The passage across this river occupied us

more than half-an-hour, so intricate was the labyrinth of the uprooted trees over which it was necessary to clamber; and the way was made still more difficult by the thorny interlacings of the Smilax and the obstructive jungles of the Rotang.

Whether open by chance or cleared by human hands, it was hard to determine, but there were spaces in the gallery-woods which were comparatively void of trees; over these was spread an abundant growth of plantains, which had a look most perfectly in harmony with the primitive wilderness around. Only on the fallen trees was it possible to effect a passage amidst the confusion of the many channels; for the network of the drooping creepers baffled every attempt to swim. At length, however, all was accomplished, and we were greeted by a view of the hospitable home of the Monbuttoo.

After taking some brief repose on the frontier of the new country, followed by troops of men and women, we proceeded to the residence of Nembey, a local chieftain under King Degberra, who governs the eastern half of the Monbuttoo, whilst the western portion belongs to Munza, a sovereign who rules with a still more powerful sway. The abode of Nembey was situated on a rivulet called the Kussumbo, which rolls on its crystal waters in a deeply-hollowed channel to join the Kahpily. Crossing the stream, we encamped upon some slightly undulated ground, encompassed by low bushes, where we erected some grass-huts that should be perfectly rain-proof. Immediately upon our arrival, Nembey, accompanied by a number of his wives, paid me a visit in my tent, and brought me a present of poultry.

Mohammed Aboo Sammat was an old friend and ally of the western king Munza, who was never otherwise than upon a footing of war with his neighbour and rival Degberra. Little therefore could Mohammed have expected in the way of welcome or hospitable reception from the king of the

Eastern Monbuttoo, if it had not chanced that his subordinate officer had discovered the advantageous ivory trade which might be opened with the strangers. This is the explanation which may be offered of the courtesy of our reception, and which accounts for the neighbourhood all round being free from any peril as far as we were concerned.

The woods on the Kussumbo I found to be an inexhaustible source of botanical treasure. Conspicuous amongst many other examples of the characteristic vegetation were the Raphia, the Elais, the bread-fruit or Artocarpus, and a species of Trumpet-tree (*Cecropia*) which was the first representative of the American genus that I had found in the continent of Africa. The oil-palm (*Elais*) is here at the extreme northern limit to which cultivation has ever transferred it, as it is still utterly unknown in all the districts of the Nile. Not until we crossed the Welle did we find it planted out in groves, and to judge from appearances it had only been planted even there for purposes of experiment.

Upon the day following our arrival at the residence of Nembey, I ventured out without any apprehension of harm into the semi-cultivated plantain-grounds which ran for some miles along the river-banks, passing as I went a long series of farms and fields that were under tillage, everywhere observing the women and children sitting in front of their neatly-kept huts and attending to their household duties.

The sun was just sinking on the horizon, and we were still enveloped in the thickets shrouded in masses of manioc and plantains, when the report of firearms, volley after volley, coming from the camp, took us by surprise, and induced us without delay to hurry back; such repeated discharges, we could not help suspecting, must too surely betoken some aggression on the part of the natives. We loaded our pieces, and trying to follow the direction of the sound, we started off on our return, but for a time we wandered vaguely about, hardly knowing how to get free of the plantations; we at

length managed to reach the villages, from which the way was quite direct. Together with ourselves streamed on a crowd of the residents, who came hurrying out, equipped with their shields and lances, or with their bows and arrows. As we approached the farms we heard the beating of the signal drums, and everywhere at the doors of the huts we saw the women and children, all eagerly bringing from the interior the necessary arms for their husbands and fathers, who were waiting impatiently without. Not knowing whether we were friends or foes, we pushed on all together along the road. Helpless enough I felt myself, as burdened with my heavy boots I tottered over the smooth tree-trunks which had been thrown across the depth of the Kussumbo; behind and before were the excited people, equipped with arms, as frantic as wild Indians, and very naturally the thought rose to my mind, how completely, if they chose, I was within their power.

It did not take long to get through the woodlands, and then again we were out upon the open. One glance at the camps before us revealed the mystery: the Nubians with their swarthy troops of bearers had been doubled in number by the arrival of another company of merchant-people from Khartoom, and in honour of the meeting the usual salvoes had been fired. The new comers were the party belonging to Tuhamy, who was an upper secretary in the divan of the Governor-General, by whose authority I was empowered to claim the hospitality of all the Seribas. To Mohammed's soldiers the unlooked-for arrival of a number of their countrymen was a welcome occurrence which they celebrated as a holiday; but to Mohammed himself the chance meeting was a vexation, from which ultimately, as he foresaw, various unpleasantnesses arose. The territories of Tuhamy's people were situated on the lower Rohl, their head Seriba being at a spot named Ronga, where they had been established some years previously by the French adventurer,

Malzac. They had come direct by the way through the districts of the Mittoo and the Madi; and at the Diamvonoo, (where I had made so large a collection of the skulls of the chimpanzees) they had had such a vigorous conflict with the Niam-niam that for two days they were obliged to defend themselves behind an extemporised abattis against the hostilities of Wando, and had not escaped without some loss of life on their side. Suspecting no mischief, they had arrived at the place just at the moment that our caravan had hurried away to escape the general conflict that seemed imminent, and accordingly they had found the natives all up in arms and ready for immediate action.

At midnight a heavy rain set in, which lasted till the morning; and in the uncertainty as to what the weather would be, our departure was delayed long beyond the ordinary hour, and we were even at last obliged to start in a thick and drizzling mist. In spite of the wet, Tuhamy's party had gone on in the early morning. We were all anxious about keeping our powder dry; but, for my part, I must own I was more concerned for the safety of my collection, which had been gathered and preserved with so much trouble. A halt was made for an hour in one of the farmsteads on our way, and the large open sheds belonging to the local superintendent were of infinite service in providing immediate shelter for the baggage. Our route crossed four streams, all flowing to the south, after which we arrived at the Mazoroody, on the banks of which the line of farms belonging to Bongwa extended a considerable way. Bongwa was a chieftain subject to pay tribute equally to Munza and to Degberra, as his possessions were contiguous to those of both these rival kings. We crossed the river, which was approached by an extensive steppe, which terminated in a declivity that led us downwards for well-nigh 200 feet, and then halting, we proceeded to erect our camp by constructing

a number of huts in the best way we could out of the masses of sodden grass.

Accompanied by his wife, Bongwa paid us a visit in camp, and allowed me the unusual honour of taking a sketch both of himself and of his better half. The old lady took her seat upon a Monbuttoo bench, wearing nothing else than the singular band, like a saddle-girth, across her lap, in the general fashion of all the women of the country. Like nearly all her race, she had a skin several shades lighter than her husband's, being something of the colour of half-roasted

Bongwa's Wife.

coffee. She exhibited a singular tattooing, which appeared to consist of two distinct characters. One of these ran in lines over the shoulders and bosom, just where our own ladies wear their lace collars; it was apparently made of a number of points pricked in with a needle, and forming a pattern terminating on the shoulders and breast in large crosses. The other was a pattern traced over the whole stomach,

standing out in such relief that I presume it must have been done by a hot iron; it consisted of figures set in square frames, and looked somewhat like the tracery which is sculptured on cornices and old arches. Bodkins of ivory projected from her towering chignon, which was surmounted by a plate as large as a dollar, fastened on by a comb with five teeth manufactured of porcupine-quills.

Since Madame Bongwa only intended to pay me a short visit, she did not appear *en grande tenue;* the picture, therefore, necessarily failed in the black figures which, for full dress, were painted on her ample flanks, and which would have given a double interest to the likeness. As a token of my recognition of the steadiness with which she sat during my artistic labours, I permitted her (and this was the greatest privilege I could afford any of the natives) to put her fingers through my hair, which to her eye was so astonishingly long and sleek.

The first hours of the following morning were spent in making purchases from the natives of a supply of yams and sweet-potatoes; the day, consequently, was somewhat advanced before we could make a start. The strips of grass-land, void of trees, into which the numerous rivulets parcel out the district, were here peculiarly narrow; in the course of a single league we passed over no less than three different streams, and then came to another, the Bumba, which we had to go over twice. Whenever we came to thickets, the Raphia or wine-palm was sure to be prominent, and put every other plant into the shade. Its noble branches are used by the Monbuttoo for making their stools and the seats which they erect upon the roofs of their huts.

A very populous district was soon reached, known as the district of Eddeedy, who being within Munza's kingdom was tributary to Izingerria, Munza's viceroy and brother. At this spot we came again into contact with the party of Tuhamy, which had encamped upon the river Bumba. We had for so

long been unaccustomed to the sight that the prospect of grazing cattle came upon us almost as a surprise. At first we were under the impression that Tuhamy's people must have brought the oxen with them; but the manifest deviation of the beasts from the Dinka type set us to inquire whence they had really come. They were of a thicker and shorter build than those we had seen, having a different formation of the skull and very prominent humps. We were informed that they had been a present from King Munza to Eddeedy. Munza himself had some years previously received a large herd of them from the powerful ruler of some people in the south-east, with whom he had concluded an amicable alliance. The tribe who were thus referred to were called by my interpreter the Maogoo, and I imagined that through this word I could get some perception of what Sir Samuel Baker meant when he spoke of the land beyond Lake Mwootan as Ulegga, and its inhabitants as the Malegga.

Taking now a more southerly direction, the road led us over three different streams, which flowed to the west to join the Bumba. On the fourth stream from the Bumba was situated the mbanga of Izingerria. It was somewhat late in the afternoon before we made our imposing entrance, and then we found both sides of the roadway lined with crowds of astonished folks who had come to gaze at our troop. The officials appeared in full state, their hats adorned with waving plumes: they had come attended by their shield-bearers, and had ordered their indispensable benches to be brought with them, that they might receive us at their ease and observe the unusual spectacle we presented with as much convenience as possible.

We took up our encampment on the steppe just beyond the stream which divided us from the circle of huts, which was arranged around an open area, and allotted to the wives and soldiers of the prince. The plots that had been cleared near the little river were for the most part planted with

I. ENTRY TO IZINGERRIA'S MBANGA. *p.* 546.

sugar-canes. The canes grew to the size of a man's arm, but I think they were generally very woody and less soft in their texture than those which grew in Egypt. Except for chewing, the natives seem to have no object in growing them, and apparently have no notion of expressing or boiling the sap, for otherwise they would not have been so surprised as they were at the bits of loaf-sugar which we gave them by way of putting their experience to the test. The plants thrive very well in the plantations, which are amply irrigated by the numerous ducts of the various streams, and, indeed, they grow in a half-wild condition. Had the natives only a better disposition for industry and a freer scope for traffic, there is no estimating what might be the value of the production which is here so bountifully bestowed.

In company with Mohammed I visited Izingerria in his dwelling in the later hours of the evening, and found him sitting on his bench in the open space, surrounded by about a dozen of his satraps. Having been made acquainted with the custom of the country that all officials, all heads of families, and indeed all persons of any distinction, whenever they pay a visit, take with them their slaves to carry their benches, because it is considered unseemly to sit, like Turks or Arabs, upon the ground, I gave orders that some of my people should, on these occasions, invariably accompany me and carry my cane chair. We took our seats opposite Izingerria, and by the assistance of one of the natives, who could talk to my Niam-niam interpreter, I contrived to keep up, in spite of the labour of a double translation, some mutual interchange of thought till the night was far advanced. Of hospitable entertainment there was not a word; perhaps it was considered inconsistent with the dignity of a formal interview, but there was not even the offer of the usual eleusine beer. The consumption of tobacco, however, was quite unrestrained. I could not help observing, without being quite able to account for the circumstance, that my cigars did not

in the least appear to attract any notice on the part of the natives, although they were accustomed to smoke their tobacco exclusively through pipes, and were as entirely unacquainted either with the habits of chewing tobacco or of taking snuff as any other of the African negroes who have not been contaminated in these respects by intercourse with Mohammedans and Christians.

The Monbuttoo use pipes of a primitive, but really of a very serviceable description, which they make from the mid-rib of a plantain-leaf. The upper classes, however, not unfrequently have a metal tube, some five feet long, made by their smiths. The lower extremity of the pipe is plugged up, and an opening is made in the side near the end, into which is inserted a plantain-leaf, twisted up and filled with tobacco. This extemporised bowl is changed as often as requisite, sometimes every few minutes, by the slaves who are kept in attendance. The only tobacco which is known here is the Virginian (*N. tabacum*, L.). With much relish I smoked a pipe of this construction, which was altogether a novelty to me, and I found that it was a contrivance that modified the rankness of the tobacco almost as perfectly as if it had been inhaled through the water-reservoir of a narghileh.

At length the attainment of my cherished hopes seemed close at hand. The prospect was held out that on the 19th of March we might expect to arrive at the Welle. The way to the river led us due south, and we went onwards through almost uninterrupted groves of plantains, from which the huts, constructed of bark and rotang very skilfully sewn together, ever and again peeped out. A march of scarcely two leagues brought us to the bank of the noble river, which rolled its deep dark flood majestically to the west, in its general aspect suggesting a resemblance to the Blue Nile. For me it was a thrilling moment that can never fade from my memory. My sensations must have been like Mungo

Park's on the 20th of July, 1796, when for the first time he planted his foot upon the shore of the mysterious Niger, and answered once for all the great geographical question of his day—as to whether its waters rolled to the east or to the west.

Here, then, I was upon the very bank of the river, attesting the western flow of the water, about which the contradictions and inconsistencies of the Nubians had kept up my unflagging interest ever since we set out from Khartoom. Whoever has any acquaintance with the indistinctness that ever attaches to the statements of those who would attempt to describe in Arabic the up-current or the down-current of a river will readily comprehend the eagerness with which I yearned to catch the first glance of the waters of which the rippling sound, as they washed their stony banks, came through the bushes to my strained and listening ear. If the river should flow to the east, why then it solved the problem, hitherto inexplicable, of the fulness of the water in Lake Mwootan; but if, as was far more likely, it should go towards the west, then beyond a doubt it was independent altogether of the Nile system. A moment more, and the question was set at rest. Westerly was the direction of the stream, which consequently did not belong to the Nile at all; it was in all likelihood not less than 180 miles distant from the most western coast of Lake Mwootan, and at the numerous rapids which are formed in its upper course it rises almost to the level of the lake, even if it does not attain a still higher altitude.*

Very similar as I have said it looked in some respects to the Blue Nile at Khartoom, the Welle had here a breadth of 800 feet, and at this period of the year, when its waters were at their lowest, it had a depth varying from twelve to fifteen feet. The banks, like the "guefs" of the Nile, rose about twenty feet above the level of the stream, and appeared to

* The measurements are given in the sketch-map in Vol. II.

consist almost exclusively of alluvial clay and some layers of blended sand and mica; but as far as I could investigate the exposed face of the river-wall, I could see neither pebbles nor drift, and only occasionally were the scanty remains of shells to be detected.

Here, as well as on the upper part of the main stream, named the Keebaly, which we subsequently crossed, no inundation of the country seems ever to occur, although the land sank with rather a sudden fall for 100 feet down to the wood-encircled bank of the river.

There was nothing remarkable about the rate at which the water flowed: on the northern bank it passed at about fifty-five or sixty feet a minute; so that the volume of water that rolled by would be about 10,000 cubic feet a second; but supposing the rate of the stream to be invariable, this volume would be nearly doubled at the season when the river was at its fullest height. The Welle is formed about twelve miles above this spot by the union of the Gadda and the Keebaly. About three weeks later (on the 13th of April) the Gadda was about 155 feet wide and two to three feet deep, whilst the Keebaly, which is the main stream, was 325 wide and at least twelve feet deep. Of the two streams just above the junction, the rate of flow was fifty-seven feet and seventy-five feet respectively. Fourteen miles above its point of confluence with the Gadda, the Keebaly forms a series of rapids flowing over innumerable crags of gneiss, making a labyrinth of little islands which are known as Kissangah, and which part the stream into many minor channels that after they are re-united reach across in a distance of 1000 to 1200 feet from shore to shore.

I made all the inquiries I possibly could about the condition and fluctuations of the river from the interpreters who were attached to the expedition, and ascertained that the water was actually at this date at its lowest level. The first indication that I had of any rise or increase in the stream

was when I crossed it again a little higher up, towards the east, in the middle of April; and to judge from what was pointed out to me then on the river-banks, I should conjecture that the period of the highest water would be about two months later.

The Welle had all the tokens of being a mountain stream of which the source was at no remote distance, and to a certainty was not in a latitude much to the south of that of the spot where we were crossing. The colour of the flood at this time of the year corresponded very remarkably with the cloudy waters of the Bahr-el-Azrek, and it is probable that when it is at its height it has that look of coffee-and-milk which the river presents at Khartoom. Moreover, there is an additional proof indicating that the river has its origin in some mountain region at no great distance, which is furnished by the fact of so many considerable streams (such as the Keebaly, the Gadda, the Kahpilly, the Nomayo, and the Nalobey) all having their channels uniting in what is comparatively a very limited area. The result of all my varied inquiries seemed to demonstrate most satisfactorily that to the south-west of Munza's residence the land takes a decided rise; and the existence of certain detached groups of hills, which according to the declarations of the natives are at no very great distance, serves to confirm my belief as to the orographical character of the country. The hills and isolated mountains to which I refer would be, I imagine, none other than the western fringe of the "Blue Mountains," which Baker observed from the farther side of Lake Mwootan (the Albert Nyanza), and of which (as he saw them on the north-western confines of the lake), he reckoned that the height must be 8000 feet.

From this spot also the position of the abodes of the tribe of the Maogoo was pointed out to me, and it lay between the S.E. and E.S.E. It was to me a very remarkable thing how accurately the natives of Africa, by the indication of the

finger, would point to any particular locality; they were also equally skilful in telling the hour of the day by the height of the sun, and I rarely detected an error of much more than half an hour in their representations. In wide open plains like the deserts of Nubia, where the journeys are made for many miles consecutively without the least variation in direction, the precision of their estimate reaches such singular correctness, that if a lance is laid upon the ground the path to which it points will lead, with scarcely a hair's-breadth deviation, to the destination required, and the road thus indicated will accord perfectly with any direct route that may be marked upon the map. Many years ago Bruce of Kinnaird alluded to a circumstance of this kind in his travels through the Nubian desert; and during my wanderings between the Nile and the Red Sea I had various opportunities of satisfying myself of the truth of what he states.

Taking into calculation the geographical configuration of this part of Africa, and relying not so much upon the representations of previous European travellers as upon the information obtained along the wide tract that extends from Lake Tsad to Kordofan and south of that line, it may be asserted that the Welle belongs to the system of the Shary. That the Welle has any connection with the Gazelle, and so ultimately with the Nile, is contradicted not merely by the general belief, but by the authenticated statements of the inhabitants who dwell upon its borders; and more than this, it is totally inconsistent with the fact that the Welle is a stream vastly greater than the Gazelle in the volume of its waters; for while both alike were at their lowest ebb on the 27th of April, 1863, Petherick has placed it upon record that the Gazelle had but 3042 cubic feet of water to roll on, in comparison to 10,000 feet, which was the volume, every second, of the Welle.

Perhaps I may seem to lay greater stress upon the information which I gained by my inquiries, than a rigorous

critic, who knows what an ambiguous country I was traversing, may be inclined to think is fair. But let me invite his attention to the following statement. Although the entire eastern portion of the Niam-niam country from Mofio to Kanna has been repeatedly visited by companies from Khartoom, and I have been repeatedly brought into contact with those who have taken part in the expeditions, I have never come across but one single individual who has represented that there is connection anywhere between the Welle and the Gazelle; and in addition to this, the Monbuttoo and the Niam-niam, with an agreement that is undeviating, all represent that the Welle holds on its course to the N.E. as far as they could follow it for days and days together, till it widens so vastly that the trees on its banks are not visible, and that at last there is nothing but water and sky. This representation would imply that the river issues in some inland lake. They have, moreover, their tales to tell of the inhabitants of the country on the lower part of the river, as to how they dress in white, and like the Nubians kneel upon the ground and say their prayers. Clearly, therefore, these residents are Mohammedans, and the direction and the distance of their abode would seem to corroborate an impression that they must be the inhabitants of some southern parts of Baghirmy.

As I have spoken of the Welle in comparison with the Gazelle, I may now be permitted to bring it into contrast with the Shary, so far at least as the lower course of this river has been explored. According to the testimony of Major Denham, who made his observations on the 24th of June, 1824, the width of the Shary at its mouth was about half a mile, while its stream had a velocity of something under three miles an hour. This would indicate a stream three times as strong as that of the Welle, and if the average depth of the waters as they flow into Lake Tsad be reckoned at ten feet it would give a volume of 85,000 cubic feet a

second, whereas at the very highest reckoning the volume of the Welle is not above 20,000 cubic feet.

On the other hand the eastern main branch of the Shary at Mele, where it was measured by Barth on the 18th of March, 1852, had a breadth of 1800 feet, and in mid-channel it had a depth of fifteen feet, while it was specially recorded as rolling on with a velocity of some three miles an hour, which, however, in a way that we should not have expected, Barth says did not make him reckon the stream as particularly strong.

That the Shary, so early as the month of March, should show an increase in the mass of its waters, would appear to indicate that according to theory it must be augmented by some other rivers coming from more southern latitudes than the Welle. It is a positive fact that there are no other streams of the least account that could possibly flow into it from the arid steppes of Darfoor and Wadai on the north; the land there has no springs, and consumes for itself whatever it receives from the clouds above. If then the Welle flows neither into the Gazelle nor yet into the Shary, it might perhaps be asked whether it is not a tributary to the ample waters of the Benue, which Barth found at Yola, on the 18th of July, 1851, to be 1200 feet in width, having an average depth of 11 feet, and a periodic change of 50 feet between the highest and lowest level of its stream; but then there would still remain the further question as to what, in that case, must be the source of the Shary, and whence it comes; and this is a question that decides for itself the full value of the counter-evidence.

It is a matter of especial interest to recollect that Barth would appear already to have announced the existence of the Welle under the name of the river of Kubanda. The people that he had about him were natives of Darfoor, who had been accustomed to carry on their expeditions for plunder ever since the year 1834. In fact he assigns the position of the river of Kubanda to the latitude of 3° N., and affixes a note to his account of it stating that "a tree, called the Kumba, is

said to grow upon its banks." Now, Kumba is the Niamniam for the abundant Malaghetta pepper (*Xylopia æthiopica*), which has communicated its name to the Pepper Coast, and in the middle ages was a spice much valued and known as Habb-el-Selim (Selim's grains), and had probably been brought into the market by the people of Morocco, long before black pepper was known at all. I satisfied myself that at present this pepper is known to the Foorians as a product of the distant south.

The transport of the caravan across the great river was by no means an easy matter; by the aid, however, of the ferrymen whom Munza had provided, it was accomplished so vigorously that in the course of three hours our last man had been carried over. The passage was effected by large canoes which were hewn out of a single trunk of a tree, and which, alike in shape and solidity, were superior to what we had hitherto seen. Some of them were not less than thirty feet long and four feet broad, and sufficiently spacious to convey both horses and bullocks. So ample are their dimensions that there is no risk of their being upset, nor did they lurch in the least degree as we got into them. They were made with both ends running horizontally out into a beak, and the border lines were ornamented with carved figures. As the current was not very strong, it was found sufficient to have two boatmen, who squatted down at each extremity of the canoe; their paddles were about five feet long, and tapered down towards the end in the shape of a narrow shovel, and to say the truth, the boatmen used them very much in shovel-fashion.

I had seen the teak canoes on the Red Sea which are called "Hoory" in Arabic, and are of a build imported from India, and many of the canoes which are in use at Suakim and Djidda, but none of these were comparable, either with respect to size or elegance, with the canoes of the Monbuttoo. It is remarkable that on the lower course of the Shary there

are no ferry-boats in use except such as are made out of a number of planks fitted and fastened together; the conclusion from this would appear to be obvious: either that there are no fine trees to be felled in that country, similar to those on the borders of the Welle, or that between the source and mouth of the Shary there are impediments to navigation which are insuperable. In the distance of about 1000 miles to Lake Tsad from the point of our passage, the stream would have fallen more than 1450 feet.

Our encampment was formed about half-a-league to the south of the river; it was encircled by the dwellings of the Monbuttoo, who had spread themselves over the declivity of a steep woody ravine. The groves in this locality yielded me every day fresh trophies in my raids upon the vegetable domains of Nature, whilst at nightfall the natives came trooping in and enlisted my curious interest. Ambassadors deputed by King Munza came to bring me his official recognition, and were charged at the same time to render to him what information they could about the doings and intentions of the wonderful stranger. As the messengers sent by the king were sufficiently versed in the Zandey dialect to hold conversation in it, I was enabled to make them understand the object of my visit to their country, and to all appearances they were thoroughly satisfied by my explanation.

We were still at a little distance from the point which we had determined must be the limit of our progress for this year; we had, however, but one day's rest to make, and then we should proceed to make our entry into Munza's quarters. A fresh world of novelty seemed to be awaiting us in this remote region, the very kernel of the continent, equally distant from the Indian Ocean and from the Atlantic. Everything was new. The bright and clear complexion of the natives, their singular garb, their artistic furniture, the convenience of their orderly houses, and finally, the savage etiquette of the pompous court, all struck me with fresh surprise and ever renewed the feeling

of astonishment. There was, moreover, an exuberance of strange and unexpected vegetation; whilst plantations, sugar-canes, and oil-palms were everywhere to be seen in plentiful luxuriance. Truly, I now found myself in the heart of Africa, realising to the letter the fascinating dreams of my early youth.

Nothing could be more charming than that last day's march which brought us to the limit of our wanderings. The twelve miles which led to Munza's palace were miles enriched by such beauty as might be worthy of Paradise. They left an impression upon my memory which can never fade. The plantain-groves harmonised so perfectly with the clustering oil-palms that nothing could surpass the perfection of the scene; whilst the ferns that adorned the countless stems in the background of the landscape enhanced the charms of the tropical groves. A fresh and invigorating atmosphere contributed to the enjoyment of it all, refreshing water and grateful shade being never far away. In front of the native dwellings towered the splendid figs, of which the spreading crowns defied the passage of the burning sun. Anon, we passed amidst jungles of Raphia, alongside brooks crammed full of reeds, or through galleries where the Pandanus thrived, the road taking us uphill and downhill in alternate undulation. No less than twelve of these brooklets *did* we pass upon our way, some lying in depressions of one hundred feet, and some sunk as much as two hundred feet below the summits of their bounding walls of verdant vegetation, and there were two upheaved and rounded hills of gneiss, rising to an altitude of some 300 feet, along the flanks of which we wound our path. On either hand there was an almost unbroken series of the idyllic homes of the people, who hurried to their gates, and offered us the choicest products of their happy clime.

Beside the streamlet which was last but one of all we passed, we made our final halt in the shadow of a large

assembly-ground that we might take our repast of plantains and baked manioc. The crowds of bearers made their camp around the stem of a colossal *Cordia abyssinica* which stood upon the open space in front of the abode of the local chief, and reminded me of the Abyssinian villages, where this tree is specially cultivated. Von Beuermann has mentioned that he observed this tree in Kanem rendering the same service as the lindens of the German villages, and forming a cool and shady resort to which the residents might betake themselves for recreation. These trees, with their goodly coronets of spreading foliage, are the survivors from generations that are gone, and form a comely ornament in well-nigh all the villages of the Monbuttoo.

And then, at last, conspicuous amidst the massy depths of green, we espied the palace of the king. We had reached a broad valley, circled by plantations, and shadowed by some gigantic trees which had survived the decay of the ancient wilderness; through the lowest part meandered a transparent brook. We did not descend into the hollow, but halting on the hither side we chose a station clear of trees, and proceeded without delay to fix our camp. We enjoyed a view in front of a sloping area, void of grass, enlivened with an endless multiplicity of huts, of which the roofs of some were like ordinary sheds, and those of others of a conical form. And there, surmounting all, with extensive courts broad and imposing, unlike anything we had seen since we left the edifices of Cairo, upreared itself the spacious pile of King Munza's dwelling.

The order for the halt was no sooner given than the bearers set about their wonted work, and labouring with their knives and hatchets soon procured from the jungles by the brook the supply of material sufficient for our architectural needs. Rapidly as ever our encampment was reared: hardly an hour elapsed before our place of sojourn was in order, with a gorgeous landscape opening in its front, and this time in

view of the royal abode of an African monarch. My own tent, which began to exhibit only too plainly the tokens of being somewhat weather-beaten by repeated exposure, was located in the very midst of the lines of our grass-huts: not now was it erected, as often it had been, upon the bare rock of a desolate wilderness, but in the centre of a scene of surpassing beauty: for the first time I had it decorated with my flag, which waved proudly above it in honour of our arrival at the court of so distinguished and powerful a prince.

The natives lost no time in crowding in and endeavouring to obtain an interview. But it suited my inclination to withdraw myself for a time. I remained in the retirement of my tent simply because I was weary of these interviews, which always necessitated my permitting either my head to be handled, in order to convince them that the long straight hair was really my own, or my bosom (like Wallenstein's when he fronted his murderers) to be bared that they might admire its whiteness. I was thus induced to remain under shelter, and meanwhile the Monbuttoo magnates waited patiently or impatiently without; they had brought their benches, which they placed close to my quarters, but I continued obstinate in my determination to be undisturbed, resolved to reserve all my strength and energy for the following day, when I should have to exhibit the marvel of my existence before King Munza himself.

END OF VOL. I.

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